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UNIVERSITY OF CALIFORNIA

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Biennial Report of the President of  
the University on behalf of the  
Regents to His Excellency the  
Governor of the State

1908-1910

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## REPORT OF THE PRESIDENT OF THE UNIVERSITY

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UNIVERSITY OF CALIFORNIA,

BERKELEY, October 1, 1910.

TO HIS EXCELLENCY, JAMES NORRIS GILLET,  
*Governor of the State of California,*

SIR: Among the external evidences of the growth of the University during the two years 1908-10 may be mentioned the following: the increase of the total body of students from 3,305 to 3,860, of the students in the colleges at Berkeley from 2,916 to 3,352, of graduate students from 324 to 425; the erection of the Doe Library Building by use of three-quarters of a million dollars, the gift of Charles Franklin Doe, with the addition of \$200,000, provided from university income, for equipment; the erection of the Boalt Memorial Hall of Law, the gift of Mrs. Elizabeth Boalt and the lawyers of the state of California; the beginning of a new and sorely needed Agricultural Building; the erection of a building for Pathology and Bacteriology; the erection of a Zoological Museum Building to store the rich collections given to the University by Miss Annie M. Alexander; the addition to the Infirmary of a wing to be used both for dispensary and clinic; the building of the Sather Gate at a cost of \$40,000, given by Mrs. Jane K. Sather; the building of an addition to the Architectural Building more than doubling its floor space; the building of six tennis courts for student use with moneys derived from the students' gymnasium fees; the purchase of 256

Evidences of  
growth of the  
University.

acres of land, constituting the main lower portion of Strawberry Cañon, and the location there of a swimming pool for student use, its construction to be paid for in a term of years out of the gymnasium fee; the establishment of a Farm School at Davis; the development of the University Farm at that place, with the erection of at least twelve buildings; the introduction of the Agricultural Demonstration Train, which in its circuit of the state was visited by 73,000 people; the annexation of the Los Angeles Medical Department for the two final years of the course, action made possible by a timely gift of \$20,000 by Mr. J. A. Graves to found the Selwyn Emmett Graves' Memorial Dispensary; the building of the San Diego Marine Biological Station at La Jolla, the gift of Miss Ellen B. Scripps; the establishment of a finely equipped Seismological Station at the University; the great extension of the University's system of publications, during the two years 1908-10, no less than 130 individual publications being issued, which does not include the University of California Chronicle, the Agricultural Experiment Station Bulletins, etc.; the final taking over of the Kearney estate of 5,400 acres, the gift of M. Theo. Kearney; the reorganization of the administrative part of the University by the creation of salaried deanships with new and definite assignments of functions, and of the teaching body of the University through the creation of the University Council, made up of deans and other representatives of all the colleges of the University—professional, technical, literary, and scientific—in other words, of the whole University.

Needs of the  
University.

At this critical period in the development of the University, its needs deserve to be stated in the first rank. A university has been rapidly taking the place of a college. The outlines of the university that is to be are now emerging. The equipment, however, remains still that of a college; notably is this true of the buildings. The older structures are entirely outgrown. The Chemical Laboratory, for instance, which was designed to accommodate



150 students is called upon now to shelter 1000 students. The founders of the institution expressly desired that an institution should be created here which should provide for their children the full equivalent of the university education offered by the institutions of the East. They desired that their children should suffer no loss by the removal of their families to the West. The creation of such an education is no easy matter, and is not to be accomplished in a day. We cannot claim to have attained to the ideal set by the founders, but we can have the confidence that reasonable progress is making with each year.

The first and most serious difficulty which confronts an institution established at so great a distance from the usual centres of population and culture is connected with the supply of teachers. No university can be worthy of the name which proceeds in a merely mechanical manner to provide instruction. Education, in spite of all machinery, will always remain essentially a matter of personalities. It has not always been easy for us either to attract to our teaching force the best men, nor to keep them after we have had them here. Our most ambitious young men are naturally attracted back toward the East, where the stimulus arising from association is greater, and the opportunities of scientific and educational assemblies, of libraries, and other equipments are superior. If we are to maintain our institution on the high standard which we have theoretically set for it we must be sure that we select our teachers from among the best. We must, therefore, be willing and able to pay the salaries that belong to the best. At present our salary scale is quite decidedly below that of the leading institutions of the East. If anything it should, for various reasons, be higher.

Higher salaries  
to attract and  
hold teachers.

We shall need within the next year or two a building to replace the old North Hall. It is weakened by age and thoroughly outworn. Besides, it involves, standing as it does in close proximity to the new Library Building, a fire peril which we cannot long tolerate. The building is

A new "North  
Hall."

capable of housing at one time classes aggregating a number of 2,000 or more. The building which replaces it must, therefore, be an ample one; it must serve for the great mass of the classes in Literature, Language, and Mathematics. Its position must be essentially that of North Hall, only removed somewhat more than the width of the present building toward the east. Holding, as it will, the place at the right flank of the Doe Library Building, corresponding to the place occupied by California Hall on the left, it must be constructed of the same materials and essentially in the same style as California Hall. It must, however, be considerably larger. Its cost cannot be reckoned at less than \$300,000.

Addition to the  
Chemistry  
Building.

Room for the  
department of  
Drawing.

The immediate need for a Chemical Laboratory will be removed by the addition to the present building of an annex in more or less temporary construction, essentially doubling the floor space of the present Laboratory. This, even though constructed in the most temporary manner, will involve an expense of not less than \$35,000. Another temporary building which we must provide for immediately is a shelter for the department of Drawing, which is being driven out of East Hall by the natural expansion of the departments of Physics and Zoology. An addition to the Architectural Building, which will provide for the department of Drawing, will cost in the neighborhood of \$20,000.

Buildings for  
Geology,  
Botany, and  
Zoology.

The departments of Geology, Mineralogy, and Palaeontology have now developed to a point where they need and deserve a special building. The old South Hall, in which they are at present located, is needed entirely for the department of Physics. It is a solid building, and, though it does not conform to the new plan of the University, can well hold its place where it stands for a half century, and will serve admirably the purposes of a physical laboratory. At the time when a building is provided for Geology, plans must also be determined upon for adjoining buildings for the departments of Zoology and of Botany. These three departments—Geology, Zoology,

and Botany—have relations to the prospective Museum, and should be built in proximity to such a building or as constituent parts thereof. The Zoological Collection, which is now housed in the temporary Museum erected two years ago, must before long find its place in a permanent museum building. This building evidently cannot be built at once, but must be built in sections as it is needed. From the very beginning, however, it must be remembered that the great collections in Anthropology given to the University by Mrs. Phoebe A. Hearst would occupy a very considerable nucleus of a museum building.

The Museum.

The University has at present no proper assembly hall. Our university exercises for Charter Day and Commencement are held in the open-air theatre. At Commencement this is well enough; for Charter Day we, however, always run the risk of interference from rain. The University Meetings are always held in the Harmon Gymnasium, but they have come now to overcrowd it. The building is not in any case suited for an assembly hall, as its floor must be kept clear from permanent seats. We need an auditorium which will seat 5,000 people and in which there is an organ.

An auditorium.

During the next two years we must expend not less than \$500,000 in buildings, and thereafter, for a series of years, not less than \$200,000 a year from our own resources. It is to be hoped and believed that in addition to this from time to time buildings may be acquired through private gift, as have been most of the buildings which we now have.—notably the Hearst Memorial Mining Building, erected and equipped at a cost of \$640,000; the Doe Library Building, representing a gift of over \$800,000; and Boalt Hall, representing gifts of \$150,000. The Agriculture Building, which is now in process of construction, will cost approximately \$300,000. It will, however, as soon as completed, be filled to the full; and we must almost immediately count upon proceeding to build one of the two wings which are included in the final plan of the building. The work in

Expenditure  
on buildings  
in coming  
biennium.



Agriculture, both of instruction and research, is at present growing more rapidly than any other activity of the University.

Medical  
department—  
needs and  
problems.

The demand for a properly manned and equipped Medical department commands and deserves at the present our best attention. Medical education is at the present time undergoing rapid development throughout our country. It has become in every way more expensive. Its maintenance cannot be covered, even remotely, by the moneys raised from fees. Thus far this University has undertaken to provide from its own resources only for the instruction of the first two medical years. It has during the last five years equipped at Berkeley the departments of Anatomy, Physiology, Pathology, and Physiological Chemistry, expending upon them each year from \$30,000 to \$40,000 aside from buildings. The work of the two last years, ordinarily known as the clinical instruction, remains still at the Affiliated College Buildings in San Francisco, where now a small University Hospital has been developed. The instruction of these two last years is provided mostly through the voluntary services of San Francisco practitioners. These have all been of high character and rank in their profession, but their chief interest remains that of their practice rather than that of their teaching. The time must soon come when the University, if it is to maintain a medical department worthy of its name, should place the instruction of these two last years also in the hands of salaried professors. A serious question as to the proper place for the maintenance of this work is raised by the present division of the Medical School into practically two departments, one in San Francisco and one in Berkeley. The teachers of the last two years miss greatly the presence and stimulus of their colleagues of the first two or scientific years. These colleagues, however, on the other hand, are properly placed at the University, where the work in which they are engaged ranks with other biological sciences and has its natural place among them. Any proposition to

return the departments of, for instance, Physiological Chemistry and Pathology back to the San Francisco buildings would be regarded by the professors concerned, as well as by the whole University, as a violence. The clinical branches of medicine are taught to the best advantage wherever there is the best provision of clinical material, that is, in the neighborhood of hospitals. It must be reckoned as unfortunate that at present in the City of San Francisco two medical schools divide between themselves opportunities and materials of medical study. The means provided, both as to money and material, are slender enough for one school. The number of students in medicine is declining everywhere in the United States. This can only be to the advantage of the profession. The decline in numbers is undoubtedly induced by the increased difficulties of the study. Ten years ago our own Medical School had an attendance of 166. This was steadily reduced by the sharp raising of our requirements, until in 1907 we had but 26 students. From that time the number began to rise—35 in 1908-09, 49 in 1909-10, 61 in the present year. We have no desire to have our classes number more than 30. If we can graduate 30 well-trained doctors of medicine each year that will be our proper contribution to the needs of society—this, at any rate, for the present. It is of more importance that we should send out men who shall set a standard than that we should send out numbers. The problems of the Medical School which must be met at once are the following: (1) How is the Hospital to be supported? It involves at present a deficit of not less than \$12,000 a year. (2) What provision is to be made for instruction in the last two years? (3) Are the first two years to remain permanently at Berkeley; if so, what provision is to be made for their shelter?

The Lick Observatory, which, when handed over to the University by the Lick Trustees, lacked all proper provision for its maintenance, has never received the support it deserved. The Lick Fund for the maintenance of the Obser-

Lick Observatory—ill-supported financially.

vatory produces somewhat less than \$5,000 a year, while the University expended last year upon the Lick Observatory \$28,835. It ought to expend more. For a long time after the Observatory became the property of the University it was hoped that private endowments might be secured from people who, as Californians, felt a pride in the excellent standing of the Observatory before the world. This has with time, however, proved fallacious, though many attempts have been made to add to the endowment fund of the Observatory. It may be regarded as a question whether the University is justified in adding largely to its present support of the Lick Observatory from funds provided by the state for education. It is probably not generally understood in the state that the Observatory is to the extent it is a burden upon the university income. I cannot refrain, in passing, from saying that the work done at the Observatory ranks everywhere in the world as work of the highest order. The Lick Observatory is a very great honour to the state, and the only discredit which it could be would be associated with any parsimony which the state or community might show toward so noble an institution.

With the shifting of Berkeley from a village to a compactly built city the increase of rents has forced the dormitory question to our attention. Our students are very poorly and expensively housed at present in Berkeley. Both board and lodging are high, too high for the slender purses of the students. The average or usual price therefor is from \$30 to \$32 a month. There are many who live for less, but they do not live well enough. The question of food is probably a more serious one than that of lodging. In facing the dormitory question the first thing would be to provide for a commons. The site at the corner of Hearst avenue and Oxford street is well adapted thereto. If a building could be provided the University could undertake the provision of board, and could undoubtedly very much lessen the expense to the students, beside laying stress

Increase of rents  
in Berkeley and  
the dormitory  
question.

upon the provision of healthful and nourishing food. The first dormitories which the University might build would naturally have their place along Allston Way between Dana street and Oxford street. The experience of other universities would seem to indicate that as an investment they could not be expected to produce more than three per cent. We need and could use immediately houses for a thousand students, and I know of no other way to provide for their erection except through private gift, reinforced perhaps by university support. It would seem to me not impossible that the University might legitimately offer to double any gift of this sort that might be made, investing in that way a portion of its endowment fund. It is, at any rate, of prime necessity that something should be done for the young people who are now crowded together in the city of Berkeley without proper housing or care and compelled to expend for lodging and board a sum certainly twenty per cent. greater than would be needed if the University intervened to help them.

It has been an unfortunate circumstance that during the last two years through lack of funds comparatively few agricultural bulletins have been published. A large number of them representing research in various branches of agriculture are ready in manuscript waiting publication. For this purpose about \$28,000 would be needed. During the last two years, through what seems to be a misunderstanding, the appropriation for university printing at the state printing office was cut in two, being reduced to \$3,000 a year in place of \$6,000 as formerly. Out of this appropriation the University has provided for the publication of the Lick Observatory reports and for the agricultural bulletins. It would be useless to attempt to print these at the small printing office at the University; it is not equipped therefor, but rather for a different type of work. The fact that the Lick Observatory reports did not appear for two years occasioned a great deal of criticism in the scientific world. Fortunately during recent months, by a

Need of funds  
for printing  
astronomical  
and agricultural  
bulletins.



provision of Mrs. Hearst, it has been possible to go on with this printing. It is to be hoped that the Legislature will make provision, by an emergency appropriation, for setting free the great mass of agricultural information which the farmers and people of the state are anxiously waiting for. The regular annual printing for the Lick Observatory and the Agricultural department will demand hereafter an appropriation of \$10,000 a year.

Proposed school  
of Forestry.

It is to be hoped that the long desired department or school of Forestry may not be much longer delayed. A number of California students have each year been obliged to seek instruction in this subject in the Yale School of Forestry or elsewhere in the East. No state has at present more at stake in its forests than California. I estimate that for the first year a school of Forestry can be maintained at an expense of about \$7,500, and it will cost \$10,000 the second year and thereafter.

University  
Extension in  
Agriculture.

The department of University Extension in Agriculture lays fair claim, on the basis of what it has achieved for the good of this state in the past year, upon an increase of its support. The state appropriation under which it is now working amounts to \$10,000 a year annually. During the year 1909-10 one hundred Farmers' Institutes were held, covering 132 days. The interest shown is indicated by the counted total of 28,108 people who attended these Institutes. Twenty-five state lecturers and 183 local lecturers addressed the meetings. In addition thereto ten speakers from the College of Agriculture devoted a total of 134 days to teaching in the Farmers' Institutes. During this period the department also operated a Demonstration Train, provided through the large-minded and far-seeing generosity and wisdom of the Southern Pacific Railroad. This train was in actual service sixty-eight days. It covered 5,674 miles of road, making 223 stops. A carefully counted total of 73,663 people visited the train. The make-up of the train comprised five exhibit cars, a lecture car, diner, sleeper, and baggage car. The increase shown this past season in

the work of the train as compared with the previous season is worthy of notice. In the season of 1908-09 the train had 37,270 visitors as compared with 73,663 in 1909-10. The people are evidently responding to the opportunity as they are coming to understand it. One hundred and fifteen reading course students were registered from thirty-eight counties of the state. Teachers to a number of 1,200 were reached by letter on the subject of nature study and agricultural instruction in the public schools. Ten thousand circulars on school gardens were sent out. It may be reasonably estimated that about 105,000 people in this state were reached by this department during the last year. It is evident that the work as at present carried on makes extraordinary demands on the teaching and investigating force of the College of Agriculture,—such that we must expect to be obliged gradually to develop a special extension corps of instructors in some measure distinct from the regular instructing and investigating force of the College of Agriculture. The request of Professor Warren T. Clarke, Superintendent of University Extension in Agriculture, for an increase of the appropriation from \$10,000 to \$17,500 cannot be regarded, in the light of these facts, as excessive. On the contrary, any one who has had any acquaintance with the good work done by this department in recent years, and the enthusiasm with which the farmers of the state receive it, will entertain no doubt that this appropriation, if made, would be returned directly twentyfold to the resources of the state within the year. The extent of the state and the great variety of its agricultural enterprises and necessities make the problem for our Extension Department vastly more complicated than in any other state. The extent of the work we are called upon to do, and the response of the people thereto, may be fairly judged by a comparison of the attendance on our Demonstration Train with that reported from other states. As stated above, our train last year was visited by 73,663 persons. A parallel figure from Missouri is 34,000, from North Dakota 19,200,

from Kansas 9,887, from Washington 9,345, from Michigan 11,034. The total from all states, as reported to the United States Department of Agriculture at Washington, is 189,645. The California figures constitute, therefore, about thirty-eight per cent. of the whole.

Summer  
school of  
surveying—  
new site.

Our Summer School of Surveying has now come to represent, under the efficient management of Professor Charles Derleth, Jr., a very important part of our engineering training, and deserves a provision for its permanent support. Thus far it has been maintained from student fees. The session of 1910 was held at a new, and, we hope, permanent site on Scott Creek, near the ocean shore, in Santa Cruz County. The student attendance for 1910 was 156, of which number 31 were junior students and 125 freshmen. On account of the large number of students two sessions, each of four weeks, are held. Last year there were 95 in the first session and 61 in the second. Each student pays a fee of twenty dollars, and board is furnished at cost. The instruction takes altogether a practical form, every student being required to undertake some specific problem, such as laying out a railway or a water course, on which he is obliged to make a report in the form that would be expected of an engineer. Once during his course each student in Civil Engineering is expected to attend this Summer School of Surveying. The new site, on which we have taken a ten-year lease, provides about 50 acres for the camp headquarters, with the use of approximately 2,000 acres of the Rancho Puerca y Las Trancas for surveying purposes. In occupying the site it was necessary to expend somewhat over \$8,000 for buildings and improvements as follows: for the instrument and office building, \$956; for a storage building, \$326; for grading and roads, \$525; for filter and storage tanks, \$477; for the water supply system, \$479; for a kitchen building, \$775; for a toilet building, etc., \$975. These expenses are to be charged against the fees of the camp for the first five years. Some additional constructions are very much needed for the next year, when,

with an additional expenditure of about \$2,000, the camp will be in complete form. We pay \$250 annual rent for the use of the property. At the end of ten years we shall have an investment upon it reaching nearly to \$10,000. This suggests the desirability of a more permanent tenure; and, as the place seems to be uniquely fitted for our purpose, as to climate, isolation, and topography, it seems to me highly desirable that we should consider the possibility of acquiring the property in permanent possession. The demand for engineers in this state calls for nothing short of the best; and this Summer School of Surveying, which has no peer or, so far as I know, rival except in the similar institution connected with Columbia University, will in no small degree contribute to the making of the best engineers.

The Bancroft Library, which has been now for five years in the possession of the University, is being organized, arranged, and classified under the charge of the Academy of Pacific Coast History, an organization which has provided hitherto by private contribution about \$6,000 annually for its support. The Library is of fundamental importance to the state of California, containing as it does what may be fairly termed practically the entire body of the birth certificates of the state; that is to say, the great mass of the fundamental documents from which the early history of this people is to be determined. Approximately 10,000 manuscripts have now been examined, put into folders, endorsed, classified, and arranged in filing cabinets. A considerable body of scholars is now engaged in the study of these documents, and the results of their study are being presented in a series of publications which have been appearing during the last two years. The following have issued:

Academy of  
Pacific Coast  
History and  
the Bancroft  
Library.

- No. 1, The San Francisco Clearing House Certificates of 1907-1908; by C. C. Plehn.
- 2, The Official Account of the Portolá Expedition of 1769-1770; edited by F. J. Teggart.
- 3, The Diary of Gaspar de Portolá During the California Expedition of 1769-1770; edited by D. E. Smith and F. J. Teggart.



- 4, The Narrative of the Portolá Expedition of 1769-1770, by Miguel Costansó; edited by Adolph van Hemert-Engert and F. J. Teggart.
- 5, The United States Consulate in California, by R. W. Kelsey.
- 6, The Diary of Patrick Breen, One of the Donner Party; edited by F. J. Teggart.
- 7, The Papers of the San Francisco Committee of Vigilance of 1851, I; edited by Porter Garnett.

It is to be hoped that without further delay provision may be made for the regular increase of the Library through the purchase of manuscripts and rare books. It would seem that this cause might legitimately appeal to the loyalty of individual Californians as well as to the state. It is a most encouraging and welcome sign that the Order of Native Sons of the Golden West has already taken positive action looking toward the support of this branch of the University's activity.

University  
Infirmary.

Our experience with the University Infirmary and our rather unique system of caring for the health of the students has, with the years, only strengthened our confidence in the usefulness of that institution. On an average, some ten students are being cared for each day in bed, and about one hundred are treated in dispensary. In the course of a year a large majority of all the students receive some medical help or advice. During the past year 2,272 students received in dispensary 18,625 treatments as compared with the figures of two years before, when 1,299 students received 9,546 treatments. The vacant lot to the north of the Infirmary is reserved in the hope that private generosity will some day provide a permanent building for the institution. The student fee of \$2.50 each semester gives the student claim upon medical attention in the dispensary and care and medical treatment in bed. Medicines are provided except in unusual cases of prolonged illness. It has been a large undertaking to provide medical attendance, but thus far, except in cases of serious surgical operations, this has been given. During the medical examinations at the opening of the year five physicians have been regularly

occupied, and throughout the year three physicians, two men and one woman, have been occupied for a considerable portion, and sometimes the whole, of their time. It is evident that this care cannot be provided exclusively from the student fee. The student receives on an average far more than he pays. The fee is, therefore, rather a form of medical insurance. The maintenance of the Infirmary would not have been possible except for private gifts which have provided for the furnishing of special rooms, the purchase of apparatus and medicines. Friends of the University, and especially the parents of the students who have experienced the benefits of the Infirmary, will recognize how reasonable an opportunity is opened here for financial aid which will benefit generations of students. The provision of an endowment fund, small or large, would contribute toward making the Infirmary more useful. Especially might such a fund be fortunately used in providing for individual cases where prolonged illness or the necessity of a surgical operation involves a burden which the Infirmary cannot well carry, and which students of slender means cannot themselves assume.

At some day, which we hope is not too remote, the University must have, as already stated, a large central auditorium in which there will be an organ. The need of the organ is, however, so great that we ought not to wait for the erection of the auditorium. Ten thousand dollars would provide to-day an organ, which could be placed in the west alcove of Harmon Gymnasium pending the opportunity of its removal to a more permanent building, at which time the organ could be enlarged. We are hoping that this very definite need of the university community may appeal to the generosity of some friend of the University and lover of music. An organ would constitute a refining and uplifting influence in the midst of our community.

Need of an organ.

I fear the community and the state have not yet fully appreciated how rich an endowment has been contributed

Anthropological  
collections and  
investigations.

to the University through Mrs. Phoebe A. Hearst's gift of the anthropological collections now housed in the western building of the Affiliated Colleges. These gifts continue year by year, and comprised during the last two years numerous valuable specimens of works of fine and industrial art, antiquity, and foreign manufacture, from many parts of the world. They have also increased in the special field of American antiquities and aboriginal history, centering in California, by acquisitions made through exploration of ancient sites in Kern and Santa Barbara Counties and at other points. The department of Anthropology has also been busied with investigations into the history, languages, and customs of a dozen vanishing tribes of California Indians, including the Yurok, Wintun, Maidu, Kato, Wappo, Shasta, Miwok, and others. Collections of utensils and other archaeological materials have been made to accompany the research into the less material products of these peoples. The results of this work have been published in a series of monographs now filling nine volumes of more than 3,500 pages, a series surpassed in this country only by the anthropological publications issued under the direction of the federal government. In the series dealing with Greek papyri and Egyptian antiquities, two large volumes have already been issued and others are in preparation. The collections, as housed now in their temporary quarters at the Affiliated Colleges, have been during the last year regularly opened twice a week to classes of San Francisco school children for an exhibition of the collections, accompanied by a running lecture given by a member of the staff. It is to be hoped that the day is not far distant when this collection can be given its proper place on the grounds of the University in a museum building worthy of the rich materials it will contain. When the University was founded the provision of a museum was reckoned among the fundamental obligations of the institution. The materials for a museum have been slowly collecting during the years in the departments of Zoology, Botany, Geology, Palaeon-



tology, and recently, with more rapid strides, in the department of Anthropology, and through the collection of mammals of the Pacific Coast as created by the generosity of Miss Annie M. Alexander. The materials for a museum are therefore present in such mass as to make it not only possible, but imperative. As we are now considering the plan for buildings to house the departments of Geology, Palaeontology, Zoology, and Botany, it would be necessary for us also to plan for the erection of at least the beginnings of a museum as the central building in the group of which these others will be a part.

The quarters occupied by the Berkeley Astronomical department have now been outgrown. When the large lecture room with 170 stationary seats was built at the Observatory it was thought that it would never be used to its full capacity by classes in Astronomy. At the opening of the term of 1910-11 the instructor was compelled to refuse further enrollment when the number reached 202 and every available space had been filled by portable chairs. The number of students enrolled during the first half year in the observational courses was sixty, the largest in any university, so far as we know. The graduate work in this department, conducted in coöperation with the Lick Observatory, has since 1901 produced nine doctors of philosophy, all of whom, with one exception, are now occupying responsible astronomical positions. And an equal number of graduate students who have not yet completed work for the doctor's degree are holding similar positions. The unusual opportunities for the study of astronomy provided by the conjunction of the two uniquely excellent departments, that of the Lick Observatory and the Berkeley Astronomical department, are fully recognized everywhere in the scientific world. Each department has its own place to fill and each deserves the best equipment and provision. They have amply earned it by the position they have achieved in the opinions of the best. When the new Museum Building comes to occupy the hill where the

Berkeley  
Astronomical  
department.

Student Observatory is now situated, the problem will be thrust upon us of selecting a site for this Observatory, and the suitability of the hills east of the university buildings for such purposes has repeatedly been urged by Professor Armin O. Leuschner, head of the department of Astronomy.

Department  
of Botany.

The department of Botany now occupies, besides the Botany Building, a portion of the upper floor in the Hearst Memorial Mining Building, where the rapidly developing University Herbarium is given a safe shelter. The lectures in Botany 1, the main general course of the department, must through lack of space in the Botany Building be delivered in a room in California Hall. This prevents the use of charts or specimens such as are essential in a scientific course. The present Botany Building is entirely overcrowded, one course, Botany 2, being given in the attic, which was originally not intended for such purpose and is not suited on account of lack of light and facilities for use at all. The present Botanical Garden to the north of the Doe Library Building will naturally have to be abandoned as that portion of the university grounds comes to be central in the new scheme of buildings. These gardens will then become merely decorative, and a new location for the Botanical Garden must be found either in the approach to the Strawberry Cañon or on the hillside to the east of the University. An increased appropriation for the year 1909-10, amounting to \$700, was expended in additional help for mounting the materials of the Herbarium; 15,482 sheets of plants were mounted in the single year, bringing the total number of mounted sheets in the Herbarium up to 41,812. The great mass of unmounted material, at least 120,000 sheets, has been partly sorted and arranged so as to be somewhat available for study. Current acquisitions amounting to 29,315 sheets have been properly arranged, catalogued, and otherwise provided for. For the purchase of herbarium cases and other work in bringing the whole Herbarium into order, a total amount of \$14,000 is needed. The work that has been achieved in the Herbarium during

these last years could not have been possible except through the active and gratuitous assistance of Mr. and Mrs. T. S. Brandegee, who have also contributed their own collection to the University. The plea of the department for a new building in which all of its various activities can be brought together cannot be much longer resisted.

Among the departments of the University none, unless it be the department of Agriculture, is of more immediate importance to the people of the state than our department of Education. The functions of the department as stated by its head, Dr. Alexis F. Lange, are conceived to be the following: (1) to further liberal culture by interpreting the significance of educational thought and institutions; (2) to advance the art and science of education by research and by training for research; (3) to give professional preparation to future high school teachers and to school administrators; (4) to assist or lead forward movements in education, especially within the borders of this state. It has been the policy of the department to concentrate its efforts on the field of secondary education and to make use of the other departments of the University to furnish instruction in branches fundamental to the science of education, such as Psychology, Sociology, Hygiene, Law, and furthermore to offer teachers' courses in the different high school subjects. Such courses are now being given in the University in the departments of Agriculture, Chemistry, English, French, Geography, German, History, Latin, Mathematics, Physical Culture, and Zoology. The schools of the state have called for teachers in the new and rapidly developing branches of agriculture, commerce, domestic science, and mechanical arts. The department of Education of the University has been doing everything in its power to meet this demand. The enrollment of students in the department for the last three semesters has been, respectively, 341, 369, 405. There are at present five candidates for the degree of doctor of philosophy whose major is in Education. The extent to which the high schools of the state are

Department  
of Education



dependent upon this department for teachers may be judged from the following statistics concerning graduates and former graduate students in the University who were teaching in California high schools during the year 1909-10. The work in summer school sessions was not reckoned in any of these lists.

Number holding bachelor's degree, without having had graduate work here .....	390
Number holding bachelor's degree and having had some graduate work before December, 1907 .....	23
Number holding bachelor's degree since December, 1907 (which implies at least one-half year or more of graduate work) .....	53
Number holding master's degree .....	77
Number of graduates of other colleges who have had some graduate work here .....	60
Number of those who mention having had work here, without specifying kind or amount .....	43
<hr/> Total .....	<hr/> 646
Number of graduates certificated in December, 1909, and May, 1910, now teaching in California public schools .....	95

It is evident that the department of Education must have the services of men of the first rank, men of wide and prolonged experience in education. We believe the department has been greatly strengthened recently by the addition to its force of Dr. Richard G. Boone and Dr. David P. Barrows. It will be necessary, however, to give the department a more complete organization, and the outlines of such an organization, involving the provision of an executive secretary and some addition to the teaching force, have been already presented by Professor Lange to the President. But the greatest urgency is the need of a State High School directly under the charge of the University, to be utilized by it in much the same way as the Horace Mann School in New York is used by Teachers' College, as the laboratory of the Department. To use Dr. Lange's words:—"Without such a school the department of Education must remain almost as inadequate as a medical school without a hospital. Two attempts have been made to secure an appropriation

from the Legislature; both have failed. Meanwhile the number of cadet teachers have increased until the problem of providing opportunities for practice teaching has become wellnigh insoluble. Makeshift after makeshift is failing in spite of the resourcefulness of our supervisor of practice teaching, Professor C. E. Rugh, and his tactfulness in dealing with the school authorities in the bay region, whose coöperation has been most hearty, but whose ability to assist the University has its obvious practical limitations. The State Board demands evidence of successful practice teaching as one of the requirements of the high school teacher's certificate, and rightly so. If the University cannot provide such training the State Board must deprive the State University of the right of recommending its graduates for the certificate."

It is gratifying, however, to observe that despite these difficulties in the way of adequate training of teachers, the high school students entering the University show steadily increasing excellence of scholarship. The Examiner of Schools, Professor Thomas, states that our students in the first half-year of the college course (with reference to which he has compiled statistics) appear to be doing distinctly better work than they did in former years—this for various reasons connected some with the schools and some with the University. He says, indeed, in his appended report that the statistics would indicate that "the class that entered the University in August, 1909, is decidedly the best class that has entered the University in all the nine years covered by our present investigation." Tables prepared by him suggest also that the students from California high schools achieve in general decidedly higher scholarship records than those from non-California schools.

Increasing  
excellence of  
California  
high schools.

As regards the need of a building for the joint departments of Geology, Palaeontology, and Mineralogy, to which in another connection a general reference was made, I wish to cite some specific statements of the professors in those

Need of a  
building for  
Geology,  
Palaeontology,  
and Mineralogy  
—statements of  
professors.

departments. The professor of Mineralogy, Dr. A. S. Eakle, says: "There are few universities in this country which give instruction to as many students as we have and there is no university in this country or Europe which has such limited and wholly inadequate room for mineralogical instruction of the kind and amount we offer to students. The only room devoted to mineralogy is room 27 South Hall, which is fitted up for elementary work and is in constant use for that kind of instruction. It has tables for forty-eight workers and the enrollment is generally greater than this number for each of the engineering sections. The lectures in mineralogy and the laboratory course in crystallography are given in a room seating thirty-six. There are now enrolled fifty students and the number has never been less and has reached seventy-five; standing room only has been a frequent situation as there is no extra space for more seats. Students in the extreme rear of the room can hardly see what is written on the board, to say nothing of what is exhibited on the lecturer's desk to illustrate the lecture. There is no other lecture room available for this large course, since the materials used in the lectures must be within easy reach. For more advanced work in mineralogy or crystallography there is no room for study, apparatus, or collections, and this condition has no parallel in any other university. Our main collection of minerals containing material which could never be replaced if lost or destroyed is arranged in overstocked drawers in the upper hallway, which is poorly lighted and unheated. We have several fine instruments for optical and crystallographical work with no place to set them up." Professor Louderback (Geology) says: "My work is spread over three floors separated by extra long flights of steps. If rocks are to be prepared for study they must be carried downstairs and then brought back for work; if I am in the laboratory with the students and wish to illustrate some point with actual material or get a reference book or memoir, or note or reference from my office, I must climb

up two flights of steps and back, etc.” The department of Palaeontology crowded into three small rooms in South Hall is obliged to store its collections in the basement of California Hall, where they are neither readily accessible nor properly disposed, being mostly stored in packing boxes. Professor Merriam says: “With the present accommodations we can hardly hope to take the place in the advancement of this particular field of knowledge which seems naturally open to the University of California.” Professor Lawson adds: “The department has shared in the growth of the University in so far as increase of students is concerned, but scarcely at all in the increase of accommodations. The arrangements in South Hall have never at any time been adapted for the work of the department, and while it was possible in the earlier years with small classes to makeshift there, the conditions are to-day so adverse that the efficiency of the department is seriously impaired.”

The department of Irrigation has grown from an enrollment of 166 in 1908 to one of 273 in 1910, a gain of 65 per cent. Its graduates are in strong demand as irrigation engineers, irrigation farmers, or irrigation managers, and the demand comes quite as much from without the state as from within. Of this year's graduates, for instance, one has accepted a position in British Columbia, one in eastern Washington, four in Nevada. The department needs more room and an addition to its teaching force. It at present uses a part of the attic of the old agricultural building, where may be found a congestion fairly exceeding anything commonly known under the forms of education.

Department  
of Irrigation.

The Military department, since October, 1908, under the admirable direction of Major E. M. Lewis, 16th Infantry, has continued to gain in that efficiency and spirit first set on foot by Captain John T. Nance, Commandant 1904-08. The total enrollment for 1908-09 was 956, for 1909-10, 1,169. In the autumn of last year a new rifle range was established on the land recently acquired by the University

Military  
department.



in Strawberry Cañon. This constitutes an important improvement upon previous arrangements not only because the range is of easier access, but because the modern high-power rifles can be used and firing extended to 300 yards. About 400 cadets have fired the past year a total of about 10,000 shots. The department is very much in need of a permanent armory building containing a drill room which can be used in rainy weather, proper space for the storage of arms and equipments, and a suitable room for the cadet band. This armory might well be located north of the new Agriculture Hall.

Oriental  
department.

Our geographical position demands a larger development of our Oriental department than has as yet been undertaken. Professor Fryer remarks that among the American students of our university the interest in Oriental languages and literature seems to be gradually extending, although not in proportion to the increasing number of openings for properly qualified men in China and Japan. The chief hindrance inheres in the lack of a distinct and separate course of study such as might be provided by the organization of a separate school after the model, for instance, of the College of Commerce, whereby the peculiar prescription of the other colleges in one of which the student of Oriental languages must register, might be avoided. Professor Fryer utilized his year of absence, 1908-09, in the study of the recent educational reform movement in China, and on his return compiled for the United States Bureau of Education a bulletin of 230 pages on the admission of Chinese students to American colleges and the details of the work each of these colleges offer to such students.

Departments of  
Philosophy and  
Psychology.

The enrollment in the departments of Philosophy and Psychology after showing for a series of years steady growth has suddenly in 1909-10 increased by over 50 per cent. It is as follows:

1906-07	1907-08	1908-09	1909-10
799	848	853	1,322

"In the introductory courses in Logic and Psychology," reports Professor Stratton, "the classes have grown to a size that carries them beyond the capacity of the rooms suitable to the work. For several years past these classes have had to be conducted in rooms outside the Philosophy Building; and notwithstanding this, many students who desired to enter the courses have, I regret to say, been of necessity excluded. In the Psychological Laboratory some of the work had to be carried on in the corridors because of overcrowding. It is to be hoped that before long some suitable provision can be made for this larger work." Unless it is possible to begin at once the permanent building for Philosophy and Education, which should have its place south of the Doe Library Building, it will be necessary next year to enlarge the present wooden building after moving it from its present position to a site due west of the Civil Engineering Building. The continued expenditure of money upon temporary construction is, however, in spite of all the crying need, sadly to be deplored.

The department of Physics is at present divided between the basement and first floor of South Hall and the ground floor of East Hall, an eighth of a mile apart. In both places it is overcrowded. Professor Slate writes: "The representations of former years about insufficiency of space assigned us, both in East Hall and South Hall, have lost none of their force. It is difficult to convey to a person not directly engaged a fair estimate of the diffused waste in time and effort entailed for both students and instructors by crowded quarters. And it tends toward discouragement when a period of five years or more closes with no move for betterment in this respect. For example our shop has no longer floor space for the necessary machine-tools. It is entirely feasible to construct an inexpensive, well-lighted and commodious workshop outside South Hall to the north, and set free valuable laboratory-space within the present limits. We propose this idea as a first amelioration; but something of real enlargement in our boundaries is a matter pressing for active steps to meet the situation."

Department of  
Physics.

College athletics  
—desirability of  
more general  
participation.

The benefit of college athletics to the students must not be measured by the participation in intercollegiate athletic events. These are or should be only the outward and final tests representative of the normal athletic life of the student body at home. If they are not based upon such a life they are vain and hollow pageants. If they exist merely for the pageant, and do not react upon the normal student life by stimulating it toward health they have no final educational purpose beyond the temporary encouragement of *esprit de corps*, and will prove themselves finally unworthy of academic purposes. The University does not propose to undertake the development of gladiators and other athletic specialists. It encourages athletic sports for the good of the whole student body to the end that the greatest possible number may share the full vigor of manhood. It is evident that if we are to adhere to the significance of this ideal, we must correct the tendencies of recent years in the direction of providing a relatively greater measure of opportunity for the average man. It is not right that we should provide as we have been doing no more than a bleacher-girt field for the almost exclusive use of intercollegiate teams, leaving it to stand vacant and fallow for the periods between training and offer nothing beyond the indoor gymnasium with its compulsory mechanics for the great mass of the students. We are moving toward a correction. We have now nine tennis courts for the students and wish to make it soon twenty. We are keeping open the old field west of California Hall and are encouraging intra-collegiate teams to use it. We are grading up another baseball field west of the chief athletic field, and hope to bring it into condition for general use. We are constructing a swimming pool (232 feet in length) in Strawberry Cañon. We are trying to find a place for a new running track to add to the present one. We ought to have near the gymnasium a series of outdoor hand ball and basket ball courts. Every student ought to have the opportunity of some daily participation in sports. Before we can, however, provide this

for three thousand undergraduates, a very great advance must be made upon our present equipment.

The creation of the office of Dean of the Lower Division has proved of great good to the students of the two first years. Each man of the freshman class is assigned for friendly counsel and closer acquaintanceship to one of a board of twenty or more 'advisors.' These advisors meet together frequently under the presidency of the Dean for conference. It is the purpose of the plan that each advisor shall make himself responsible to cultivate an intimate social and personal acquaintance with the individual men who are assigned to him, and seek to aid them not only in the choice and pursuit of their studies but in all matters concerning their personal welfare during the period of their adjustment to a new life in new surroundings. I wish to call special attention to the appended report of the Dean of the Lower Division.

Dean of the  
Lower Division  
and the  
advisors.

Under the direction of the Dean of Women and her assistant a similar work is undertaken for the women of the two lower classes, attention being particularly directed toward aiding the women in their selection of a home during their residence at the University.

Dean of  
Women.

The Greek-letter fraternities and other student clubs are coming more and more with the years to assume, though without original purpose, the task of providing homes for the students in default of dormitories. The much mooted question whether these fraternities are or are not an advantage is on the whole a purposeless one. They are here and are developing in response to a well-marked need. It behooves the University to recognize them and utilize them. They are capable of great good. Some of them, under bad management and the predominance of lax and reckless membership, have been the means of evil to many individual students. Sometimes they have drifted into evil merely through lack of firm oversight either on the part of their older members or their alumni. The tendency throughout the whole body of these intercollegiate fraternities has been

Fraternities  
and student  
clubs—  
comparative  
scholarship  
records.



of late toward the formation of a stronger and more responsible central control administered by a national body of graduates. We propose to assist this by a frank recognition of the local chapters as responsible bodies. We keep them informed of the standing and work of their members, and use them in helping to set their men right. Statistics of scholarship recently compiled in the office of the Recorder of the Faculties for the Dean of the Lower Division show that the average scholarship of men in the fraternities falls seriously below that of the average male student. Reckoning by the percentage of first and second grades obtained, the average of all male students is 49.5 per cent., while that of fraternity men in twenty-two fraternities is only 39.7 per cent. The clubs, which are ten in number and apparently differ but little in organization and purpose from the fraternities, show a percentage of 51.8 per cent. The reason for this difference is not readily apparent, but it is certainly notable that eight of the ten clubs outstrip the general student average, whereas among the twenty-two fraternities only two accomplish this. The greater intensity of the social bond on the part of the fraternities and the fuller preoccupation with interests outside study may be in some measure accountable. The fact, in any case, that attention has been called to the existing conditions has already stirred the fraternity organizations to a considerable activity in coöperating with representatives of the faculty to right matters. Experience has shown that it is much to the advantage of a fraternity even from the point of view of self-preservation, to maintain good scholarship. Poor students usually drop out of college by the middle of the course and leave their fraternities weakened at the top,—a thing which is fatal to internal management and discipline, as well as to standing before the university community. On the other hand, fraternities which select men for scholarship, quickly outgrow the stigma of nourishing “grinds,” and rising steadily on the solid foundation of the success of their graduates, grow with the years into repute

and prestige. Under the conditions which have brought together into our great colleges thousands of students in an almost unclassified mass, it seems that the fraternity has naturally and planlessly emerged, to yield a recognizable social unit. It seems to me to be the opportunity and duty of the University to recognize this new growth, to utilize it in college management, to give it responsibility and to shape it toward good ends.

Our system of student self-government has steadily grown with the years in solidity and effectiveness, and during the last two years has in particular achieved notable strength and success in dealing with cases of dishonesty in examinations. Though this system exists as yet by help of no written word, it exists and is strong by virtue of a universal recognition and support.

Student self-government.

The gross income of the University for the year 1908-09 was \$1,444,386.99, from which must be deducted, in order to obtain the true income applicable to the current expenses of the year, the following sums:—

Income for 1908-09.

First, \$26,862.48, the income of the Wilmerding endowment.

Second, \$337,695.15, a sum made up of special items having no direct relation to university instruction, such as gifts for endowments, for scholarships, for astronomical and other scientific expeditions, or for other scientific purposes.

Third, \$169,728.76, being \$99,902 set apart for improvements out of the two-cent tax; \$69,826.76, special state appropriations for the University Farm.

Fourth, \$20,709.02, the amount of fees received from students of the Summer Session.

Fifth, \$28,006.35, the amount expended on Lick Observatory salaries and expenses.

Sixth, \$31,934.22, being \$31,788.03 for income on investment added to the principal; \$146.19 for income devoted to special purposes.

There remained thus for current expenses of the year \$829,451.01. Of this amount of income, \$28,217.79 was

expended on building operations other than the Permanent Improvement Fund: the income set aside for this latter fund has been deducted in the third paragraph.

The sources of this income were as follows:—

First, money received from the United States government, under the head of Morrill College Aid Fund and the Agricultural Experiment Station funds (Hatch Fund and Adams Fund), \$61,000.

Second, the proceeds of the two-cent tax applicable to current expenses, being three-fourths of the total amount thereof, \$299,705.14.

Third, special support, \$100,000; special appropriation for reimbursing loss of income, \$50,657; special appropriations for Agriculture, \$30,500; special appropriation for the chair of Music, \$3,000; special appropriation for establishment of State Hygienic Laboratory, \$2,000.

Fourth, income on invested funds, including rents of real estate (after deducting first, fifth, and sixth items as mentioned above), \$120,839.53.

Fifth, laboratory deposits of students and sundry miscellaneous items, \$161,749.34.

Income for  
1909-10.

The gross income for the year 1909-10 was \$2,808,842.76, from which must be deducted, in order to obtain the true income applicable to the current expenses of the year, the following sums:—

First, \$26,925.07, the income of the Wilmerding endowment.

Second, \$1,245,708, a sum made up of special items having no direct relation to university instruction, such as gifts for endowments, for scholarships, for astronomical and other scientific expeditions, or for other scientific purposes. (This figure includes valuation of the Kearney Vineyard \$1,000,000, and the Los Angeles Medical department real estate and improvements \$100,000.)

Third, \$270,478.79, being \$182,746.97 set apart for improvements out of the three-cent tax; \$87,731.82, special state appropriations for buildings, equipment and improvements at the University Farm.

Fourth, \$26,983.32, the amount of fees received from students of the Summer Session.

Fifth, \$28,835.36, the amount expended on Lick Observatory salaries and expenses.

Sixth, \$31,325.47, being income on investments added to the principal.

There remained thus for current expenses of the year \$1,178,586.75. Of this figure of income, \$46,700.98 was spent on building operations other than those provided for in the Permanent Building Fund. The income applied to the Permanent Building Fund is deducted in the third paragraph.

The sources of this income were as follows:—

First, money received from the United States government, under the head of Morrill College Aid Fund and the Agricultural Experiment Station funds (Hatch Fund and Adams Fund), \$68,000.

Second, the proceeds of the three-cent tax applicable to current expenses, being three-fourths of the total amount thereof, \$548,240.90.

Third, special support, \$100,000; special appropriation for reimbursing loss of income, \$50,657; special appropriations for Agriculture, \$87,748.40; special appropriation for the chair of Music, \$3,000.

Fourth, income on invested funds, including rents of real estate (after deducting first, fifth, and sixth items as mentioned above), \$122,265.67.

Fifth, laboratory deposits of students and sundry miscellaneous items, \$198,674.78.

A very considerable part of the increase in the University's expenditures applies to the department of Agriculture. Ten years ago we expended about \$55,000 annually on agricultural education and research. In the year 1909-10 we expended \$92,905.32 on buildings, equipment, improvements and live stock, and \$211,448.48 on salaries, expenses, investigations, etc., making a total of \$304,353.80. Our total expenses for the last year at the University Farm alone



were \$165,729.85, of which \$88,067.31 were spent on buildings, improvements, equipment, and live stock. Of this total amount expended at the Farm \$124,526.30 was derived from state appropriations. The significant fact is that our total expenditures for agriculture have reached a figure very nearly six times as great as ten years ago.

Pledging of  
future  
income on  
permanent  
undertakings.

The Secretary's Report for the last year appears to show a surplus. This unfortunately is fallacious, the surplus being a mere matter of bookkeeping. In actual fact the University is working under a very heavy deficit by reason of its policy of pledging its future income in carrying out certain present undertakings of permanent fundamental importance. The land in Strawberry Cañon has been, for instance, purchased at an expense thus far of about \$162,000, and a total expense of \$233,000 will be reached when the purchases are complete. This expense is divided up over our income for ten years. In the same way we are building the Agricultural Building at a cost of \$300,000 and distributing the expense over our income for the next ten years. The equipment of the Doe Library at an expense of \$200,000 is being divided likewise over ten years; that is, we charge \$20,000 a year against our income in the permanent building fund for ten years. The Bancroft Library was purchased in like manner, and we have one more installment of \$25,000 to pay back to ourselves. Undertakings involving a prospective expense of \$733,000 are now being carried on upon the basis of the permanent building fund, which produces about \$175,000 per annum. Our plan for distributing the use of this fund over a series of years does not, however, take the form exclusively of paying out in advance of receiving. We are, for instance, laying aside \$10,000 each year and propose to do it for twenty years in order to complete the Doe Library Building. This money so spared, with accumulated interest, joined to the balance in hand of the Doe Fund with accumulated interest, we hope will make this magnificent building complete in twenty years or less. The increased space in the

bookstack will at the present rate of growth of our library be needed within ten years.

In contrasting the financial necessities of our University with others it is proper to note that we are practically without income from student fees except in the professional colleges. Our infirmary fee of five dollars a year is given directly back to the students and more with it; our gymnasium fee of three dollars a year is directly expended upon the towels in the gymnasium and wash rooms, upon the maintenance of tennis courts, and, indeed, is pledged in advance to the expense of constructing the new swimming pool. The various laboratory fees are merely a charge for materials used. A comparison of the regular fees exacted in different universities for the four years' study leading to the A. B. degree, as well as for the engineering degrees, yields the following table:

The question  
of student fees.

Fees at other  
universities.

	For the A. B. Degree.		In the Engineering Colleges
University of California	\$32.00	University of California	\$32.00
University of Missouri	40.00	University of Nebraska	34.00
University of Nebraska	42.00	University of Kansas	50.00
University of Kansas	50.00	University of Colorado	65.00
University of Colorado	65.00	Ohio State University	90.00
University of Minnesota	80.00	University of Illinois	111.00
University of Wisconsin	88.00	University of Minnesota	120.00
Ohio State University	90.00	University of Missouri	120.00
University of Iowa	100.00	University of Wisconsin	132.00
University of Illinois	111.00	University of Michigan	200.00
University of Michigan	140.00	Cornell University	631.00
Cornell University	431.00	Yale University	653.00
University of Chicago	495.00	Harvard University	716.00
Harvard University	616.00	Massachusetts Institute	
Yale University	638.00	of Technology	1000.00

The expense at the University of California is relatively still less than the figure \$32 here represented, inasmuch as this amount includes the infirmary fee (\$20), which in the case of most universities does not exist. Most universities charge a regular tuition fee. Some charge it and call it another fee. The annual tuition fee at Harvard

is \$150; at the University of Iowa, \$20; at the University of Michigan, \$30 (non-residents, \$40); at the University of Minnesota, \$20 (engineering colleges, \$30); at the University of Illinois, \$24; at the University of Wisconsin, \$20 (engineering colleges, \$30); at Yale University, \$155. It is in accordance with the general ideas of Californians regarding their public school system that no tuition fee except for non-residents has been established. I believe it remains distinctly the sentiment of the state that none shall be established. It is necessary, however, to recognize what a difference is made by the omission from our income budget of the usual tuition item which appears in the budgets of other universities. If each of our undergraduates, for instance, paid the usual tuition of Harvard and Yale it would add a half million dollars a year to our income.

A comparison of the attendance of students in 1909-10 with that in 1900-1901 yields the following table:

Number of  
students in the  
University.

	1909-10	1900-01
Graduate students	425	183
Undergraduates	2953	2058
Total in the colleges at Berkeley	3352	2229
In the San Francisco colleges	797	502
Total	3860 compared with	3024

The attendance for the opening year shows a gain in practically all parts of the University, except the technical schools, of about one-seventh; that is, in 1910 there were one-seventh more students than in 1900. In the colleges of arts at Berkeley the men have shown a gain of 161, the women of 85, while the technical schools incur a loss of 22. Law shows an increase of 27, medicine of 31, agriculture of 17, commerce of 28. Including the Summer School, the Wilmerding School, and the University Farm School, and deducting for duplication and not including the extension courses or the short courses at the Farm School, the number of persons enrolled under the University's management and in enjoyment of its income is at

this date 5.034. or if the extension courses be included, 5.824.

I cannot close this report without voicing the grief of the entire university community at the death on October 5, 1909, of Professor Irving Stringham, Dean of the Faculties, and since 1882 head of the department of Mathematics. He was able and patient and wise, and all that he was he gave with a fullness of loyalty rarely equalled to the service of this University.

Death of  
Professor  
Stringham.

Respectfully submitted,

BENJAMIN IDE WHEELER,

President of the University.



STATEMENT OF EXPENDITURES FROM THE TWO-CENT  
TAX FOR THE YEAR ENDING JUNE 30, 1909.

## Administration:

Salaries	\$31,269.72	
Expenses	27,096.30	
Janitors	24,262.85	
Electric Light and Power, maintenance	27,336.30	
General Repairs	13,727.68	
Water	4,566.04	
Publications	5,000.00	
Equipment	2,820.36	
Fuel	1,135.97	
Telephone, Telegraph and Expressage	3,124.54	
Postage	1,978.61	
Auditing	1,550.00	
Stationery	524.99	
University Site, maintenance	13,240.97	
Administrative Printing	7,750.18	\$171,384.51

University Library		34,959.72
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## Departmental Expenditures:

Agriculture	22,481.12	
Anatomy	5,999.88	
Anthropology	4,684.58	
Architecture	7,069.94	
Astronomy	6,105.73	
Botany	10,704.92	
Chemistry	19,096.73	
Civil Engineering	13,718.01	89,860.91

State of California Scholarships		3,500.00
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Permanent Improvements		99,902.00
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1909:		\$399,607.14
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January, Cash Received	271,074.46	
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June, Cash Received	128,532.68	
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	\$399,607.14	
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STATEMENT OF EXPENDITURES FROM THE THREE-CENT  
TAX FOR THE YEAR ENDING JUNE 30, 1910.

## Administration:

Salaries	\$71,539.87	
Fellowships	3,573.33	
Expenses	28,832.69	
Electric Light and Power, maintenance and repairs	33,239.12	
General Repairs	17,003.75	
Water	4,650.05	
Publications	9,546.43	
Equipment	2,780.15	
Fuel	1,687.74	
Telephone, Telegraph and Express	4,268.18	
Postage	1,724.43	
Auditing	2,410.00	
Stationery	1,145.84	
University Site, maintenance	14,338.55	
Administrative Printing	9,970.01	\$206,710.14
University Library		41,641.64

## Departmental Expenditures:

Lick Observatory	23,792.03
Agriculture	24,434.16
Anthropology	5,589.30
Architecture	7,226.64
Astronomy	7,899.76
Botany	11,739.92
Chemistry	22,140.18
Civil Engineering	15,625.78
Drawing	6,969.29
Economics	2,451.68
Mathematics	21,064.87
Mechanics	19,289.67
Medicine	15,341.87
Military Science	2,299.28
Mining	16,487.07

Oriental Languages	1,481.15	
Palaeontology	3,783.29	
Pathology	6,099.96	
Philosophy	5,490.11	
Physical Culture	6,099.92	
Physics	20,476.44	
Physiology	12,804.78	
Political Science	6,327.36	
Romanic Languages	17,699.72	
Sanskrit	1,599.96	
Semitic Languages	1,591.73	
Zoology	10,833.20	296,639.12
State of California Scholarships		3,250.00
Permanent Building Fund		182,746.97
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1910:		\$730,987.87
February, Cash Received	489,108.49	
June, Cash Received	241,879.38	
		<hr/>
		\$730,987.87

## LICK ASTRONOMICAL DEPARTMENT

(LICK OBSERVATORY)

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MOUNT HAMILTON, July 1, 1910.*To the President of the University,*

SIR: I have the honor to submit herewith my fifth biennial report, covering the period July 1, 1908, to July 1, 1910.

Volume VIII, Publications of the Lick Observatory, containing seventy-one heliogravure full-page reproductions of Director Keeler's photographs of nebulae as obtained with the Crossley reflector, as well as a list of 744 nebulae discovered from the original negatives, was mailed to our correspondents in December, 1908. The reproductions were satisfactory in the main, and it is believed that they set a new standard of excellence. The work was well received by astronomers.

The financial difficulties connected with the publication of our results are well illustrated in the history of this volume. It was necessary to raise funds for this purpose by serious and prolonged personal effort. Beginning in 1902, private subscriptions were received amounting, in 1904, to approximately \$2400. The State Board of Examiners and the State Printer in 1904 authorized the transfer to this purpose of approximately \$3900, from special funds in the resources of the State printing office. Advancing prices during the years when the heliogravure reproductions were in progress added substantially to the original estimates of cost, and these advances were met from successive annual budgets of the Observatory. The



last bill was paid in the spring of 1910, the financial operations of issuing one volume having extended through eight years.

Upon the completion of the Keeler volume, it was hoped that we could proceed promptly with the reproduction of our splendid and unique series of solar coronas, coronal and chromospheric spectra, etc., as illustrations for a proposed volume to contain the results of the Phoebe A. Hearst Eclipse Expedition to Chile, and of the Crocker Eclipse Expeditions to India, Georgia, Sumatra, Egypt, Spain and Flint Island. A State appropriation for this purpose was requested by the Board of Regents, and favorably reported upon by the last Legislature, but the appropriation was not made effective.

The publication of Professor Barnard's photographs of the Milky Way and comets obtained on Mount Hamilton in the years 1890-95, referred to in my last Report, has made some progress in the biennial period. Professor Barnard is hopeful that the reproductions will be completed in the coming winter. Funds for this purpose were collected by Professor Barnard from generous friends in California, before his resignation from the Lick Observatory staff in 1895.

The number of Lick Observatory Bulletins issued to date is 182, extending into Volume VI. The increased cost of printing renders it impossible to avoid annual deficits in the special fund appropriated for this purpose. Exceedingly regrettable delays in the issuance of Bulletins now and then are apparently unavoidable, owing to limited facilities in the University printing office. For example: In the publication of Bulletin No. 181, more than sixty days passed between the sending of the MS. to the University Press and the supplying of first proof sheets; about seventy days passed between our returning of the first proofs and our receipt of the second proofs; and another delay ensued before the Bulletin went to press. Altogether the publication of this Bulletin consumed five months.

It is with deep regret that we record the lamented death of Darius Ogden Mills, former Regent of the University, member of Mr. Lick's first board of trustees for the Lick Observatory, and donor of the D. O. Mills Expedition to the southern hemisphere, as well as of two Mills spectrographs at Mount Hamilton. His interest in the spectrographic work, for which he made provision, was intellectual as well as financial. A year and a half before the date of his death, the observations secured during the first period of the D. O. Mills Expedition by Professor Wright were ready in manuscript form for publication. Mr. Mills' enquiries evinced interest in these results, and hopes were extended to him from time to time that they would be published. Uncertainties as to whether and when the State printing office could undertake the work—uncertainties over which I had no control—delayed the publication from time to time until it was too late for Mr. Mills to see the completed volume. My estimate of the expense of the D. O. Mills Expedition had contained no item to provide for publication, for our results in the past, obtained on Mount Hamilton or on the Hearst and Crocker eclipse expeditions, had been published by the State printer without question, and there was no reason to foresee that this method would fail in the case referred to. After nearly two years of unresolved uncertainty, and shortly after Mr. Mills' death, the unfortunate delay was mentioned to Mrs. Hearst, Regent of the University of California, and she most generously, and with the most unselfish of good wishes to all concerned, made private provision for publishing the results by the University Press. Her gift will be available in a few weeks, and it is hoped that the printed results will be ready for distribution soon.

Regrets have been expressed by many astronomers, orally, in letters and in print, that these results should be so tardily made available; but uncertainties over which I had no control prevented publication in the usual channels,

and also prevented efforts to secure private funds for the purpose. This explanation seems essential.

It will have appeared that our publication problems have been troublesome and discouraging, with consequences which may be more than regrettable. In the abstract, it must be an unwise policy which locks up the results of extensive investigations.

A grant of \$4000 was made by the Carnegie Institution of Washington in 1908, in continuation of similar grants in earlier years, for the employment of assistants and computers. On this foundation the following Carnegie Assistants have been employed: Miss A. M. Hobe, July 1, 1908 to July 1, 1910; Miss L. B. Allen, July 1, 1908 to July 25, 1909; Mr. Keivin Burns, June 1, 1909 to November 1, 1909; Mr. Kristian Lows, October 1, 1909 to May 1, 1910.

A few computers have also been employed on this foundation in piece work. These resources have been devoted almost exclusively during the biennial period to the measurement and reduction of spectrograms for determining the radial velocities of stars. Acknowledgments of this assistance are gratefully made.

Early in 1909 the Regents of the University generously appropriated the sum of \$10,000 to complete the fire proof building, with safe storage vaults to contain our collection of celestial photographs, and rooms suitable for various requirements of photographic research. The building was finished in the spring of 1910, the appropriation having permitted the carrying out of the original plans, with the addition of a few desirable improvements. Several of the rooms are in use, and it is planned to transfer all the photographs, all the records, and all unused parts of instruments, in the latter part of the present year, after the concrete walls shall have been thoroughly dried out by the summer weather.

The seismographic installation, generously provided by Honorable William R. Hearst, has been received. A special concrete room has been constructed in the basement of the

meridian circle, with appropriate approaches, and the instruments will be erected and used before the close of the present year. The purchases had been delayed, in accordance with the advice of experienced seismologists, in order to receive the benefit of pending improvements in the instruments.

It has been my ambition to make the library of the Observatory as complete as possible in all departments closely related to the lines of research undertaken here, and to have it include the more important available works on the history of astronomy. The President and Regents of the University gave generous expression to their approval of this policy by appropriating the sum of \$2,000 for additions to the library, early in the year 1910.

The Crossley Reflector, in common with other similar instruments, was designed to follow the subject under photographic observation not only approximately by means of the excellent driving clock, but accurately by delicate motions given directly to the small plate holder carriage. This is the best known plan for following the so-called fixed objects. In order to utilize this powerful instrument in securing large-scale photographs of objects which move rapidly amongst the stars,—of comets, for example, and especially of Halley's comet,—it was necessary to arrange to give delicate slow motion to the entire instrument, in right ascension and declination. This involved the installation of anti-friction bearings for the two ends of the polar axis and for the two supports of the declination axis, and of two end-thrust bearings for the declination axis. The instrument was dismounted in January, 1910, while the large castings were taken to San Jose for turning out to receive the roller axis-bearings, and the end thrust ball bearings which had been constructed previously. The instrument was out of commission only ten days. These improvements have been very successful. Though the moving parts of the telescope weigh about six tons, a pull of four pounds on the end of the tube is sufficient to move



the telescope in declination, and a pull of eleven pounds moves it in right ascension.

At the same time, a guiding telescope of aperture  $3\frac{1}{2}$  inches and focal length equal to that of the large mirror, 17 feet, 5 inches, was fixed on the side of the main telescope tube. This small telescope, whose eye-piece is supplied with electrically illuminated wires, serves well its purpose of guiding upon moving objects. The original mechanism for moving the telescope slowly in declination by an observer at the upper end of the main telescope has been extended to the lower end, where it is within convenient reach of the observer at the eye-piece of the new guiding telescope.

A special room for silvering the mirrors has been constructed within the lower story of the Crossley dome, and a number of other minor improvements have been made.

All the walks, hitherto of wooden construction, have been replaced within the biennial period: the gently inclined walks with heavy planking, and galvanized iron pipe railings set in concrete; and the level walks with heavy concrete. Several new walks, joining frequented points, have been laid with concrete.

Prior to 1910 there were no restrictions as to driving over all parts of the summit unoccupied by buildings. A cement curbing, starting at the north end of the main building, running around the north and east sides of the meridian house, and thence to a point near the northeast entrance to the great dome, now limits vehicles to one definite narrow driveway near the north, east and south borders of the flat summit, and to the flat on the west side of the main building. All other free space on the summit has been graded with rich soil, and a good start on lawns has been made.

In the early months of 1909 and 1910 afforestation immediately around the summit was undertaken, in charge of Mr. Wright, by planting acorns, of Mount Hamilton growth, and many hundreds of nursery trees one and two years old. The number of new trees living at the date of

this report is disappointingly small, but the experience gained should be useful in guiding similar work, on a larger scale, in future years.

We are under great obligations to the Forestry Department of the United States for advice, and for liberal supplies of young trees.

It is scarcely possible for dwellers in ordinary locations to realize the difficulties of lawn-making and tree-growing on Mount Hamilton. The soil is thin and the drainage is perfect; there are no summer fogs and clouds; the air is of desert dryness; and the dryness is in effect accentuated by prevailing winds. New trees must be liberally irrigated through several summers, and especially during those months when the springs are running lowest. Reservoirs for the storage of the water surplus of winter and spring must be the starting point in plans for lawns and trees.

In the summer of 1909 the Regents appropriated the sum of \$2700 to erect a steel tank, of 160,000 gallons capacity, on Kepler Peak, to supplement the storage capacity of the brick and wooden tanks (160,000) already installed there. The heavy steel tank, on a carefully prepared foundation, was completed in September 1909. Notwithstanding the shortage of rainfall in the past season, and the heavy withdrawal for irrigation, all the storage reservoirs were full on July 1, 1910.

The slopes immediately below the flat summit are composed of broken rock, dumped over the edge when the summit was leveled off, about the year 1880. Wherever this rock has disintegrated during the intervening thirty years, the native grasses and wild oats have obtained a foothold. It is planned to assist this process by throwing a light coating of soil, containing the seeds of these growths, over the more conspicuous of these slopes. It is believed that much can be done, in this manner, and at little expense, to cover the forbidding rock slopes and slightly to reduce radiation effects in the atmosphere immediately surrounding the domes containing the telescopes.

The section of the overhead electric line running from the switch-board down to the Crossley dome suffered frequently and severely from the high winds of winter, and it was wrecked several times. This section was undergrounded in 1909, assistance to that end having been generously afforded by the Pacific Gas & Electric Company, of San Francisco, and by the Standard Underground Cable Company, of Pittsburg, Pa. Service over this line has not been interrupted since the change was made. The overhead lines running eastward from the switch-board should be undergrounded, and it is hoped that this improvement may be afforded in the near future.

In August 1909 the rates of the stage company, which supplied mail, passenger and freight service between San Jose and Mount Hamilton, were in effect more than doubled. In this emergency the passenger and freight service essential to the Observatory and its people was supplied by our own wagons, mule team and driver, from September 1, 1909 to July 1, 1910. Two round trips per week to San Jose were made.

The schedule of the horse stages has been lengthened from time to time during the past twenty years, but never shortened. In various ways the service grew poorer. One reason for this lay in the fact that travellers were growing tired of slow stages, and more visitors were coming to the Observatory in automobiles than in carriages. When the Post Office Department requested bids for carrying the mails during the four year period beginning on July 1, 1910, none were entered by horse stages. The Department generously expressed a willingness to pay an increased sum, up to a certain limit, for an expedited automobile mail service. The subject was not easy of agreement, and it was feared for a time that the six day per week mail service must be reduced to a three day per week mail service. Fortunately, at the last moment, arrangements were made acceptable to the department and to the automobile stage company, and it is confidently expected that the automobile

service for the mails, passengers and small freight will be thoroughly modern.

Many of the photographs secured at the Flint Island eclipse of January 3, 1908, have been submitted to careful study with interesting results.

It was feared that the rain in the five minutes immediately preceding totality had injured the photographs forming the basis of search for intramercorial planets, as the water got inside of the camera and ran across the dry plates in the plate holders. Dr. Perrine compared the images of stars recorded on these plates with the charts of the same region of sky formed photographically at Mount Hamilton before the eclipse. The images of 506 stars were found on the Flint Island plates. Several of these are fainter than 9.0 visual magnitude, and a large number are between 8.0 and 9.0. From the distribution of the fainter stars on the plates it appears that the search was uniformly successful throughout the entire critical region, and that they suffered no detriment from the rain. In fact, the water-streaked areas on the plates recorded their quota of stars as faithfully as the unstained areas.

All the images were identified as known stars and planets. The taking of duplicate negatives covering the entire region enabled a definite decision to be made concerning other suspected images on any of the plates, and all such were found to be the usual and unavoidable defects in the films. These observations make it practically certain that there are no intramercorial bodies of 8.0 visual magnitude, or brighter, in or near the plane of the sun's equator, with elongation distances of 12 degrees, or less, as viewed from the earth.

It has been shown by Dr. Perrine that a planetary body of 8.0 magnitude in the region searched could hardly be more than 25 or 30 miles in diameter, and that it would require fully one million such objects as dense as Mercury to produce the observed distributions in Mercury's motion. Considering this fact, and the greatly increased number



of objects required if they should be one or two magnitudes fainter than the limit of our search, I think we may say that the intramercorial problem in its original significance is concluded as to its observational side. It would not be surprising if a number of small planets should be found on the occasion of future eclipses, but it is felt that these would be totally inadequate to supply the disturbing attractions upon the inner planets, which gave origin to the so-called intramercorial-planet problem.

Dr. Aitken has continued the double star survey of the northern sky according to the systematic plans described in previous reports. 385 new double stars were discovered, in the biennial period, with the 36-inch refractor. The two component stars in every case are less than five seconds of arc apart. This survey as carried on at Mount Hamilton will extend to  $-22$  declination and include all stars as bright as 9.0 visual magnitude. Fully ninety per cent of the survey of the northern sky is now complete. The unobserved areas are in the winter sky. Given average winter observing conditions, I shall hope to note the completion of the survey in my next report. Thus far, 3500 close double stars have been discovered, as one result of the survey: 1300+ by Professor Hussey, and 2200 by Dr. Aitken.

The problems of the stellar system cannot be regarded as solved unless they are based upon homogeneous observations extending over the entire sky. There is unanimity of opinion amongst astronomers that the Lick Observatory double star survey, extending from the north pole of the sky to  $22$  degrees south of the equator, should be extended on to the south pole of the sky, as early as practicable, and that Dr. Aitken is the logical man for this work. Given a first class refracting telescope of from 20 to 27 inches aperture, at a good location in the southern hemisphere, four years of observing should suffice to make the survey complete. Careful consideration has been given to the subject of ways and means for accomplishing this purpose. Two practicable plans appear to be available. I describe one:

The Government of the South African Union is constructing a well equipped observatory at Johannesburg, in the Transvaal. The principal instrument called for in the plans is the 26-inch refracting telescope now under construction by Sir Howard Grubb. The maker has promised delivery early in the year 1911. Director Innes of the Johannesburg Observatory, with exceeding generosity, has offered the use of the 26-inch refractor, without charge, to Dr. Aitken, in order that he may complete the Lick Observatory double star survey. According to this proposal, Director Innes would use the telescope about three hours of each clear night, and Dr. Aitken the remainder of the night. There should be no special difficulty in securing funds to cover the expense of the expedition, and it is hoped that Dr. Aitken may enter upon these plans immediately following the completion of the telescope.

It is scarcely necessary to repeat the truism that the great value of this splendid survey lies not in the discoveries of more double stars themselves, but in the increased opportunity which these discoveries will afford in the future study of double stars in particular, and of the structure of the stellar universe in general. For example: Utilizing the results in a small section of the sky, Dr. Aitken has made a statistical study of the number and distribution of visual double stars, and of the relations existing between the angular separation, the numbers and magnitudes of the systems whose components are closer than five seconds of arc. He has found that the number of double stars whose components are really close to each other is greater than the number of those whose components are more widely separated. This surprising result should, of course, be confirmed by studies based upon the double stars distributed over the entire sky as soon as the survey shall have been finished. We have here a mere suggestion of the fruits which must come out of the complete survey.

Dr. Aitken has maintained his micrometer observations of a short selected list of well known double stars, which are in rapid orbital motion.

New orbits have been computed for the binary stars  $\beta$  612, 55 Tauri, 4 Aquarii, and a preliminary orbit for  $\pi_2$  Ursae Minoris.

Dr. Aitken observed the position of the two satellites of Mars with reference to the planet on five nights in September and October 1909. The measures involved more than 2700 micrometer settings. The eclipses of Saturn's satellites were observed on three nights.

The determination of the solar parallax, as derived from the photographs of Eros taken with the Crossley reflector in 1900, and measured here by means of a special grant from the Carnegie Institution of Washington during the years 1905-8, was brought to a conclusion early in 1909 by Dr. Perrine. Two methods of solution, essentially independent, led to the values of  $8''.0070$  and  $8''.0064$ . There was no apparent reason why one of these values should be given greater weight than the other, and the simple mean was adopted as the final result: Solar Parallax =  $8''.8067$ . Confidence is felt that this value must be near the truth, and as accurate as the original mounting of the Crossley reflector would permit us to obtain, especially as it was not possible to reach an essentially different value by any reasonable variation in the methods of combining the results for the different nights of observation. The work is undergoing publication by the Carnegie Institution.

When the spectrum of Mars was under observation on Mount Hamilton in 1894, for the purpose of detecting the presence of water vapor in the planet's atmosphere I found that the water vapor in the earth's atmosphere was, and is, the great obstacle in the way of success. I then resolved to repeat the observations from Mount Whitney, the highest point in the United States, when the planet would again come into position favorable for the purpose. At this elevation, 14,500 feet, about four-fifths of the vapor contained in the atmosphere should be below the observer, and but one-fifth above him. The planet would be favorably placed in August-September, 1909, when Mars would be near the

Earth and high above the horizon at the time of the year when Mount Whitney could be ascended with instruments. Late in August, 1908, I ascended Mount Whitney, in order to determine the limiting sizes of the instruments which could be transported safely over the rocky trails on the backs of pack animals, and to plan the living arrangements for the proposed expedition of 1909. Director Abbott, of the Smithsonian Institution Observatory, accompanied me. Remaining on the summit throughout the night of August 24, 1908, we found low relative and absolute humidities, which promised well for the contemplated observations of the spectrum of Mars.

Before leaving the summit it was decided that observations in 1909, requiring residence of a week or more on the summit, should not be undertaken unless a building of some kind could be erected as a shelter in case of storm. The question was presented to Dr. Walcott, Secretary of the Smithsonian Institution, and through his lively interest an appropriation was made from the Hodgkins Fund to provide a permanent stone, steel and glass building containing three rooms for the shelter of the 1909 and future expeditions.

As soon as the shelter was assured, Mr. Wm. H. Crocker, Regent of the University of California, made generous provision for all the expenses of the expedition from the Lick Observatory, including such pieces of new apparatus as were required to complete the equipment.

The members of the expedition were Director Campbell, Assistant Astronomer Albrecht and Carpenter Hoover of the Lick Observatory; Dr. Miller of San Jose, who cared for the health of the party; Professor Alexander McAdie, who was detailed by the Chief of the Weather Bureau to accompany the expedition; Mr. W. L. Skinner, of Lone Pine; and Mr. G. F. Marsh, of Lone Pine, who met us on the summit, he having completed the building on the morning of our arrival.

We were on the summit of Mount Whitney from August



28 to September 4, 1909. The atmospheric conditions were extremely favorable on the nights of September 1 and 2, and successful photographs of the spectra of Mars and the Moon were obtained.

The conclusion drawn from the observations, in view of the extreme faintness and apparent equality of the water vapor absorption bands in the Martian and lunar spectra, as observed at small zenith distances through a minimum of water vapor, is that the quantity of any water vapor existing in the equatorial atmosphere of Mars at the time these observations were made was too slight to be detected by available spectographic methods. Recalling that the rays as photographed had passed from the Sun through the planet's atmosphere, for the most part down to its surface and out again to us, thus traversing the Martian atmosphere twice, and multiplying the absorptive effect, it is difficult to conceive that the quantity of vapor above unit area on Mars could exceed or equal the quantity of terrestrial water vapor above the the same area on Mount Whitney.

In particular, it is not contended that Mars has no water vapor. The waxing and waning of the polar caps are usually considered as evidence of the existence of water vapor and snow on that planet, and this is the opinion which I have always held; but the quantity of vapor must be too slight for detection by the insensitive spectographic method referred to.

There has been a disposition in certain quarters to say that the conditions on Mount Whitney were really not favorable for this purpose, because the observations were made in the summer season and the higher atmospheric strata of the Earth must have contained much water vapor. It need only be remarked that the evidences of water vapor absorption by the terrestrial and Martian atmospheres combined were exceedingly slight, and it should be apparent to everyone that the more vapor there was above Mount Whitney the less there could have been in the Martian at-

mosphere in order to produce the minute observed effect.

It is well known that several astronomers of a generation ago utilized the Doppler-Fizeau displacements of spectral lines to distinguish, in the observed solar spectrum, between absorption lines of truly solar origin and the absorption lines of water vapor and oxygen introduced by the Earth's atmosphere. The approach of the eastern edge of the Sun toward the terrestrial observer, and the recession of the western edge from him, displaced the lines of solar origin to the violet and red, respectively, from their normal positions, whereas the terrestrial lines remained in their normal positions.

It was realized by me as early as 1896 that the same principle could be applied in observing the spectrum of Mars for evidence of water vapor and oxygen absorption in that planet's atmosphere, provided the spectrum could be photographed with high dispersion; for when Mars is at or near quadrature with reference to the Earth, the two planets are relatively approaching or receding from one another, 20 kilometers per second, more or less, depending upon the concurrence of favorable circumstances. If the spectrum of Mars were photographed under these conditions, the absorption lines introduced by the Martian atmosphere and the absorption lines introduced by the Earth's atmosphere should be seen separate and side by side on the photographic plate. Mars was favorably situated for this purpose in January and February, 1910. A special high dispersion spectograph was constructed, partly from Wm. H. Crocker funds, partly from funds granted by the Rumford Committee of the American Academy, and partly from University funds. The necessary observations of the Martian spectrum and the lunar spectrum for comparison were obtained in January, February and March by Dr. Albrecht, who also measured the plates. The dispersion employed was such that the water vapor lines originating in our atmosphere and any originating in Mars' atmosphere should have appeared side by side, though not entirely

separate. If the absorptions by the two planets were equal, the two sets of lines of equal intensities should, in effect, have appeared as broad lines of double width, and their centres should have been displaced by one-half of the relative velocity of the Earth and Mars. The facts are that the terrestrial lines were not bordered by Martian lines, nor increased in width.

When the micrometer wire was set successively in the positions which Martian absorption lines would occupy, no traces of absorption were found in these positions. In fact, Martian absorption did not exist to such an extent as to be visible in the spectrum, nor did it influence the measurements referred to. Similar results were obtained for the oxygen lines. The quantity of water vapor in the Martian atmosphere must have been small in comparison with that contained in the atmosphere above Mount Hamilton under the excellent conditions prevailing at the time of observation. Likewise, the quantity of oxygen above unit area on Mars must have been small in comparison with that above the same area on the Earth. It should be repeated that the rays of light utilized had passed, in effect, at least twice in the Martian atmosphere, thus multiplying any existing absorptive effects.

The return of Halley's comet was anticipated with considerable interest, and preparations were made to secure series of observations as complete as possible.

In the interval, September 12, 1909 to July 1, 1910, Dr. Curtis obtained 360 direct photographs of the comet on ninety-one nights. 202 of these were made with the Crossley reflector, 118 with 5-inch and 6-inch portrait lenses, and 40 with small lenses whose ratios of aperture to focal length were unusually great. The four smaller cameras were mounted on the massive tube of the Crossley reflector, and great steadiness and accuracy in following were thus maintained.

It appears probable that our photographs of Halley's comet form the most extensive series extant. They are of

great interest now, and they should be of consummate interest seventy-five years later when the return of the comet is imminent. A large selection from the series should be made for reproduction, but here we encounter again the publication problem. The sum of \$600 should be used for this purpose, and we hope that a way may be found to issue an exhaustive paper, completely illustrated, in one of our regular mediums of publication. Dr. Curtis is making an extensive study of the plates; Mr. Wright has valuable spectroscopic observations extending throughout the apparition of the comet; numerous observations of the tail were made by various members of the staff, especially when the tail was near the Earth; and the results of all of these observations should be issued in a manner worthy of the subject and occasion.

It is characteristic of comets' tails that they curve backward from the line drawn from the Sun through the nucleus: the degree of the lagging being a function chiefly of the comet's distance from the Sun. It was expected that the tail of Halley's comet would lag behind the line joining the Sun and nucleus to a certain extent, in which case the Earth would pass through the tail of the comet on the night of May 18th. It transpired that the tail lagged behind much more than could have been anticipated, and that the Earth did not pass centrally through the tail. It is probable that we passed through the south side preceding edge of the tail. No unusual phenomena were observed in this connection.

On the nights preceding and following May 18, 1910, Halley's comet was a magnificent spectacle as viewed through the clear atmosphere of Mount Hamilton.

An interesting study of Comet *c* 1908 was made by Miss Glancy, Fellow, based upon photographic observations secured here by herself. This comet was the most active of any comet, as to transformations in the structures of its tail, since the application of the photographic dry plate to this subject. The comparison of photographs made on



successive nights, and in several cases of two photographs on the same night, revealed in the clearest possible manner that the tail materials were traveling outwardly from the head, with high velocities, in response to some force or forces originating in the Sun, as required by essentially all recent theories of tail formation.

When this comet passed to the southern sky Dr. Curtis, in charge of the D. O. Mills Expedition at Santiago, Chile, secured excellent photographs with large portrait cameras, which he had borrowed from Santiago photographers, thus extending the accurate historical record of this interesting object through several weeks.

The spectrum of this comet was likewise epoch making. Observations obtained at Mount Hamilton and Santiago, and at several other observatories, brought to light an essentially new form of cometary spectrum, in that lines arranged in rhythmical pairs were given accurate observation. Professor Fowler, of London, has since succeeded in matching this spectrum in his laboratory by light obtained electrically from rarefied carbon monoxide under certain conditions, but it has not yet been made clear why the spectrum of this comet should differ so widely from that of other similar observed comets.

Micrometer observations of comet positions have been obtained as follows:

Comet <i>c</i> 1908	8 nights	Miss Glancy
Comet <i>a</i> 1909	7 nights	Miss Glancy
Comet <i>e</i> 1909	5 nights	Aitken
Comet <i>e</i> 1909	6 nights	Young
Comet Halley	14 nights	Aitken
Comet <i>a</i> 1910	5 nights	Aitken
Comet <i>b</i> 1910	7 nights	Young

Miss Glancy made micrometer observations for the positions of the asteroids Juewa(139) on 4 nights, and of Athor(161) on 7 nights.

Accurate positions of comets were determined from Crossley photographic plates by Dr. Curtis on twenty

nights for Comet Halley, and on three nights for Comet *a* 1910.

The excellent weather prevailing during the more interesting phases of Halley's comet enabled Dr. Aitken to secure on May 15 the last position observation prior to the transit of the comet's head across the Sun of May 18, and on May 20 the first position observation following the transit, so far as published observations enable us to determine. These observations are of special value in connection with perturbations of the comet arising from its close approach to the Earth.

In the summer of 1908 Mr. Fath, Fellow, investigated the nature of the faint light which for many years had been noticed on summer nights along our northern horizon. Three hypotheses as to the origin of this light were examined: That it is an aurora; that it is a twilight arch; and that it is the Zodiacal Light. Sporadic observations of a similar nature had been made in earlier years by Herriek, Newcomb and Barnard. It seemed fair to conclude from Mr. Fath's observations that the phenomenon is the Zodiacal Light.

The lenticular illumination of the sky, which we call the Zodiacal Light, can usually be traced east and west from the Sun, entirely across the night sky of Mount Hamilton and other good observing stations. This establishes that the materials which send the light to us are distributed approximately in the plane of the ecliptic, or of the Sun's equator, even further out from the Sun (east and west) than the orbit of the Earth. Mr. Fath's observations of the illumination above the northern horizon at midnight on fourteen nights established that the materials responsible for the Zodiacal Light extended northwardly from the Sun at least 46 degrees, as viewed from the Earth.

These studies must be considered as merely preliminary. There is opportunity for an efficient organization of observers occupying selected observing stations in both hemispheres to obtain exceedingly valuable results as to the

form and dimensions of the lenticular volume containing the Zodiacal Light, and of the variations in Zodiacal Light intensity as we proceed outwardly from the Sun. The subject is one of growing importance.

The spectrum of the Zodiacal Light was photographed by Dr. Fath in the fall of 1908 on Mount Hamilton, and in the fall of 1909 on Mount Wilson. The spectrum appeared to be a replica of the solar spectrum, in so far as could be judged from the faintness and small scale of the photographic image. We here have strong evidence in support of the view that the Zodiacal Light is sunlight reflected from concrete particles distributed throughout the lenticular volume referred to.

The thesis of Mr. Fath, in partial fulfilment of the requirements of the Degree of Doctor of Philosophy in the University of California, based upon the spectra of some spiral nebulae and globular star clusters photographed with the Crossley reflector, was a successful beginning in the study of an important subject. The spectra of the spiral nebulae are described in the text books as continuous. Mr. Fath found that no spiral nebula investigated has a truly continuous spectrum. They vary from spectra consisting principally of bright lines, such as are found in the gaseous nebulae, to those containing only absorption lines of the solar type. These objects appear to occupy early places in the evolutionary development of stars and the stellar system, and the investigations should be continued on a more extensive scale.

The spectrum of the great cluster of stars in Hercules gave evidence of containing stars of different spectral types, while two other clusters recorded spectra of the so-called F type, or the type which indicates average effective age. A spectogram of the great nebula in Andromeda, of excellent density, reveals a type apparently identical with that of our Sun. It is difficult to interpret this observation, except upon the theory that this, the most prominent nebula in the whole sky, is in reality an extremely distant aggrega-

tion of stars whose processes of evolution have reached the solar stage.

The thesis of Mr. Duncan, Fellow, in partial fulfilment of the requirements for the Degree of Doctor of Philosophy in the University of California, studied the orbits of the Cepheid variable stars Y Sagittarii and RT Aurigae, and the possible causes for this type of stellar variation. The orbits deduced for these two stars, from spectrographic determinations of their radial velocities, confirmed the remarkable fact first announced in Dr. Albrecht's thesis, that the stars of this class have maximum brilliancy at the time of their most rapid approach to the observer, and minimum brilliancy at the time of their most rapid recession from the observer; in other words, that the brilliancy of a variable star of this class at any instant is a function of the observer's position in space. Mr. Duncan discussed several hypotheses to explain the variations of brilliancy, but it must be said that no thoroughly satisfactory explanation has yet been presented.

The appointment of Astronomer Perrine to the Directorship of the National Observatory of the Argentine Republic, and his departure in April, 1909, necessitated several changes in our observing staff. Dr. Heber D. Curtis, in charge of the D. O. Mills Expedition at Santiago, Chile, was called back to Mount Hamilton, to succeed Dr. Perrine in charge of the Crossley reflector, and in other duties. Assistant Astronomer Joseph H. Moore was appointed Acting Astronomer in charge of the D. O. Mills Expedition. The latter left Mount Hamilton in April, 1909, and assumed charge of the Expedition on June 10, 1909. Dr. Curtis returned to Mount Hamilton on August 22.

The second period of the D. O. Mills Expedition, in immediate charge of Dr. Curtis, extending from March 1, 1906 to June 10, 1909, was characterized by most commendable activity. The number of photographs of stellar spectra secured in this interval was approximately 1600; all of these were measured in a preliminary way and a large



proportion of them definitively: Comet Morehouse, especially interesting from the unival changes in the structure of the tail and as to its spectrum, was studied on many nights; and Dr. Curtis took an active part in the Pan-American Scientific Congress of 1908-09, presenting one general and two technical papers on astronomical subjects.

The high standards set by Astronomers Wright and Curtis, successively in charge of the expedition, have been maintained by Acting Astronomer Moore. The number of spectrograms secured from June 10, 1909 to July 1, 1910 was nearly 900. The duties of Mrs. Moore, Assistant, have related to the measurement of the spectrograms, and the measures and reductions have almost kept pace with the observations.

The faithful services of G. F. Paddock, Assistant Astronomer, throughout the administrations of Messrs. Curtis and Moore should be acknowledged. An assistant to measure the plates was not employed during the second period of the Expedition, and the measures were necessarily in arrears. Messrs. Curtis and Olivier have devoted a portion of their time at Mount Hamilton to the measures and reductions. It is a great satisfaction to say that all the southern spectrograms secured up to the end of the year 1910 will have been measured and reduced by that date.

The total number of spectrograms secured at Santiago during the three administrations, up to July 1, 1910, was 3384. The total number of stars observed is 710. With a few exceptions these are all south of declination —20 degrees. The accuracy of the resulting radial velocities of the stars is fully up to present-day standards.

The solution of the larger problems of the sidereal system is demanding that the spectrographic observations of stellar velocities be applied to as many stars as the light collecting powers of existing telescopes will permit. The D. O. Mills Expedition is fitted to secure these observations, rapidly, and with remarkable economy. Funds pledged by the late Mr. Mills are sufficient to maintain this work only

until the spring of 1911. It is hoped by astronomers in all countries, as well as by those of us immediately concerned, that the life of the Expedition may be extended at least five years or, if possible, that endowment will be available for obtaining results in perpetuity. To have the work cease next year would be a pity.

The most extensive investigations in progress at Mount Hamilton relate likewise to the spectrographic determination of stellar velocities by means of the D. O. Mills spectrograph attached to the 36-inch refractor, in accordance with the program entered upon by Mr. Campbell in 1896. The spectrograms secured on this program during the biennial period are numbered from 5318 to 6529. Approximately 1000 stars all north of declination  $-30$  degrees have been observed in this manner. The observing program, as finally made, definitely includes all stars brighter than 5.01 visual magnitude, as assigned in the Revised Harvard Photometry, lying in the north three-quarters of the sky; and it is planned to secure at least four observations of each star, except for those stars whose spectra are found to contain no measurable lines. The observations of the latter will be deferred until after the completion of the remainder of the program, when dispersion lower than that of 3-prisms will then be employed upon these stars; and, as the exposure times will be short, this supplementary program should be completed rapidly. The observing program is essentially complete for all stars accessible for summer observation. A small section of the winter sky is in arrears; but given the average number of clear nights next winter the remaining observations should be secured. Largely by virtue of assistance supplied by the Carnegie Institution of Washington, the measures and the reductions of the photographs are nearly up to date.

The total number of stars observed at Mount Hamilton and at Santiago, not counting twice those observed at both stations, is more than 1600.

The number of stars whose radial velocities are variable,

under the influence of invisible companion stars, continues to increase. Twenty-five systems of this kind have been announced from Santiago and fifty-three systems from Mount Hamilton during the two years. More than fifty additional binary systems have been discovered at the two stations, and are awaiting announcement later in the present year.

Many of the stars which have been under observation at Mount Hamilton during the past ten or twelve years, which were thought to be traveling with constant speeds, are now found to be moving with variable radial velocities in orbits of long periods.

More than 400 spectrographic binary systems have been discovered in the past fifteen years, principally by the Mills spectrographs at Mount Hamilton and at Santiago, and by the Bruce spectrograph at Williams Bay, out of not more than 1700 observed stars. Thus one star in four, approximately, of those previously supposed to be single is proved to be a close double, the invisible companion in each case being of nearly the same order of mass as the primary star. The proportion is rapidly increasing, and as the observations are extended over a longer period, enabling us to detect variable velocity in the case of slowly revolving systems, we must expect that at least one star in every two or three is a spectroscopic binary. In fact, the star whose radial velocity is constant, indicating that it is not attended by a massive close companion, may be the exception and not the rule. In fact it would not be surprising if our polar system, consisting of a great central sun and a family of very small planets, should prove to be not the prevailing type of stellar system, but an extreme type. In this connection we should note the total absence of evidence that any other star is attended by planets comparable in minuteness with the planets of the solar system.

Up to January 1, 1910, the radial velocities of 1020 stars had been determined with the Mills spectrographs at Mount Hamilton and at Santiago, after excluding stars whose

spectral lines did not admit of accurate measurement, several other stars whose deduced velocities depended upon a single observation, and those spectroscopic binary systems for which the velocities of the centres of masses had not been determined. Published velocities were available also for forty stars observed with spectrographs at other observatories and not yet observed with the Mills spectrographs. Adding the velocities for thirteen nebulae, as obtained in 1890 by Keeler, using visual methods, there were 1073 radial velocities available for the preliminary solution of certain fundamental problems of the stellar system. With the assistance of my colleagues, the computations for these solutions were made prior to January 20, 1910; and below are given the leading results, in outline as they were delivered in the Silliman lectures delivered in Yale University between January 24 and February 2, 1910. Lack of space prevents the quoting of details.

Assuming that the apparent radial velocity of each star was the reflex of the Sun's motion through space, and giving equal weight to each of 1047 objects, a solution of the 1047 resulting equations by the method of least squares assigned a speed of 17.73 km. per second to the solar system, toward that point in the sky whose right ascension is 273.5 degrees and declination  $+28.0$  degrees.

Another solution was made by combining 1047 stellar velocities into 172 groups and solving the 172 resulting equations. The deduced motion of the solar system was at the rate of 17.77 km. per second toward that point in the sky whose right ascension is 272.0 and declination  $+27.5$ .

It is expected that a more definite solution will be made next year, and no doubt these elements obtained for the solar motion will be slightly altered.

After the effect of the solar motion upon the apparent motion of each star was eliminated, the velocities of the stars were tabulated with reference to their spectral types. The results were as follows. The letters O and B represent



stars in the early stages of evolution, and M the oldest stars.

No. of Stars	Spectral Types	Average Velocities
141	O and B	8.99 km.
133	A	9.94 km.
159	F	13.90 km.
529	G and K	15.15 km.
72	M	16.55 km.
13 nebulae (Keeler)		23.4 km.

The number of nebulae is entirely too small to make the result trustworthy for them, but in the first five lines of the table we have the remarkable discovery that the speed of a star in space is a function of its spectral type: new stars move slowly and old stars move relatively rapidly. It appears that the velocity of a star increases as it grows older. It is difficult to conceive that stellar velocities should vary otherwise than in accordance with the law of gravitation, each star moving under the combined attractions of all the other stellar systems in the universe, but it is not clear why the velocities should in general increase with time.

Kapteyn discovered six years ago that the stars have a preference for motion toward and from two opposite points of the celestial sphere: one of the points being in right ascension 93 degrees and declination +12 degrees. His determination was based upon the observed proper motions of stars. A half dozen confirmations were promptly published by other astronomers, basing them also upon proper motion data. Our radial velocity determinations afforded an admirable test of Kapteyn's conclusion. If the stars are moving at random, the average velocities of approach and recession should be equal in all parts of the sky. If the stars have a preference for motion in the directions assigned by Kapteyn, the velocities of approach and recession should be greater in the vicinity of the two points defined by Kapteyn than in areas intermediate between these two points. I found that 154 stars lying within 30

degrees of Kapteyn's points have an average radial velocity of 15.9 km. per second; that 383 stars lying in the zones 30 to 60 degrees from these points have average radial velocities of 14.0 km. per second; and that 508 stars situated in the zones 60 to 90 degrees from these points have average radial velocities of only 12.75 km. per second. It was therefore found that the average radial velocities near Kapteyn's points are approximately thirty-three per cent. greater than the average velocities of the stars situated midway between these points. Kapteyn's conclusions were confirmed.

The radial velocities of the stars permit us to determine the average distances of large classes of stars, though not of individual stars. Computations to this end, while highly preliminary, led to interesting conclusions.

The view had prevailed that early-type stars were further away from our position in space than are the older stars. Kapteyn's results, for example, placed the early-type stars approximately two and a quarter times as far away from us as the older-type stars. My results do not confirm this conclusion. It is found that the stars of different spectral types are in general quite thoroughly mixed.

It was found that all classes of stars down to the fifth, and especially the brighter magnitudes, were further away than the formulae for average distances had placed them; that is, that the scale of the sidereal universe is greater than had been previously been supposed.

More complete solutions of the problems referred to, which are but a few of those resting quite directly upon our observational results, will be undertaken in the near future, when the observational data shall have been rendered more homogeneous by the completion of the program.

A systematic study of spectroscopic binary stars led to many interesting conclusions. A few of these in brief are:

First, the period of revolution in a binary star is a function of the spectral type: the periods for early types are in general short, and for later types in general long.

Second, the eccentricity of the orbits is a function in general of the periods of revolution and, therefore, of the spectral types: the orbits of the short period early-type binaries are in general nearly circular, whereas the orbits of the long period late-type binaries are in general very eccentric.

The orbits of about seventy spectroscopic binary systems available at the time that the photographs were made seem to afford confirmation of the theoretical conclusions of Darwin, Poincaré, and See, concerning the origin and development of the binary stellar systems.

L. O. Bulletin No. 181, forming a Second Catalogue of Spectroscopic Binary Stars, lists all spectroscopic binaries discovered prior to January 1, 1910, and all orbital data available on March 15, 1910, and contains the report of my studies of spectroscopic binaries just described.

Dr. Moore computed the orbit of the Cepheid variable X Sagittarii.

Mr. Merrill computed the orbit of the spectroscopic binary  $\beta$  Capricorni.

Dr. Curtis observed at Santiago the radial velocity of the star Cordoba Zones, 5<sup>h</sup>.243, whose proper motion is the largest known, and found that it was receding from our solar system with an unprecedented speed of 242 km. per second.

Mr. Olivier, Fellow, has utilized time spared from other duties for the discovery and measurement of double stars south of the southern limit of the Lick Observatory double star survey. He discovered and measured forty-four pairs, and obtained several hundred observations of double stars already announced.

Mr. Olivier's special interest has lain in the observation and study of meteors. He has charted 1223 in the last year, and has computed the orbits of all for which the observational data are satisfactory.

Mr. Wright studied the bright hydrogen lines in the spectrum of the variable star Omicron Ceti, in order to

determine whether the multiple character of these lines is due to the action of magnetic forces in the star, in accordance with the phenomenon known as the Zeeman effect. He obtained no evidence of this effect.

Mr. Wright is making systematic studies of the spectra of nebulae and of various stars whose spectra contain bright lines, taking advantage of recent advances in photography to record the spectra in the yellow, orange and red regions. A number of new nebular lines and stellar bright lines have been discovered in this manner.

The Rumford Committee of the American Academy of Arts and Sciences has made grants of funds to provide a Hartmann photometer, to be used in the study of polarized light in the solar corona as based upon photographs of the corona obtained by the Crocker eclipse expeditions; and to provide a quartz spectrograph for general utility in the study of celestial spectra in the ultra-violet. Both instruments are now utilized for the purposes specified, the former by Mr. Young and the latter by Mr. Wright.

A considerable number of minor studies by various members of the staff are not mentioned from lack of space.

The resignations of Astronomer Perrine and Assistant Astronomer Albrecht to accept, respectively, the positions of Director and First Astronomer in the Argentine National Observatory, were recommended for acceptance with regret. Their services were exceedingly efficient. Confidence is felt, however, that their efficiency will assist in the development of astronomy in the southern hemisphere, and in removing arrears in the special lines of investigation for which the observatory at Cordoba is equipped. It is of interest to note that nine astronomers, who have been connected with the Lick Observatory, have recently spent several years in southern hemisphere astronomy, or have accepted permanent duties in the southern hemisphere. It is unavoidable that some disorganization should result from these frequent changes, but the end in view is worth the cost.



Dr. Aitken was Lecturer in the Summer Session of the University for the years 1908 and 1909.

Director Campbell was Silliman Lecturer in Yale University for the academic year 1909-10. He delivered eight lectures on the subject "Stellar Motions," with special reference to stellar motions as observed with the spectrograph.

The Janssen Prize of the Paris Academy of Sciences, consisting of a gold medal, was conferred upon Director Campbell in the spring of 1910.

The Director is pleased to acknowledge again the cordial support of all the members of the staff, and to express appreciation and thanks to those members of the staff who have assisted him in securing and measuring stellar spectrograms.

Respectfully submitted,

W. W. CAMPBELL,  
Director of the Lick Observatory.

## SAN FRANCISCO INSTITUTE OF ART

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SAN FRANCISCO, July 1, 1910.

*To the President of the University,*

SIR: I have the honour to submit the following report of the San Francisco Art Association (San Francisco Institute of Art) for the two years beginning July 1, 1908.

The affairs of the Institute show a gratifying condition both in the scope of its undertakings and the success which has attended them. We conduct regular exhibitions, when the paintings and sculpture owned by the Association have been kept on view for the benefit of the members and the public, the latter having been admitted free of charge. The following is a list of the special exhibitions held during the year: October 22 to November 6, 1908, Autumn Exhibition of Water Colors and Sketches by California artists; November 20 to December 3, 1908, Complimentary Exhibition of the paintings of William Keith; December 8 to December 15, 1908, Exhibition of Plaster Models submitted in competition for the monument to Commodore Sloat, to be erected at Monterey; March 26 to April 23, 1909, Annual Spring Exhibition of Paintings and Sculpture by California artists; April 27 to May 4, 1909, Exhibition of American Posters; May 7 to May 12, 1909, Exhibition of the work of the Art Department of the Elementary Schools of the City; May 15 to May 29, 1909, Annual Exhibition of the School of Design; November 27, 1909, Japan Society of America, Exhibition of the Paintings of Kubota Beisen; December 10, 1909, to January 7, 1910, Exhibition of the Emanuel Walter Collection of Paintings, Drawings, etc.; January 27 to February 2, 1910, Exhibition of the work of the Chicago

Art Institute School; February 4, 1910, Exhibition of Paintings contributed by the artist members of the Bohemian Club for the Newton Tharp Fund; February 8 to February 22, 1910, Exhibition of Paintings by Joseph Raphael; February 26 to March 16, 1910, Exhibition of Studies for Mural Decorations, by Edwin Howland Blashfield; February 26 to March 16, 1910, Exhibition of Drawings and Etchings, by Joseph Pennell; March 17 to March 24, 1910, Exhibition of Drawings and Paintings for Magazine Illustration; April 8 to May 4, 1910, Annual Spring Exhibition of the Art Association; May 14 to May 21, 1910, Annual Exhibition of the School of Design. In addition to the foregoing special exhibitions the Architectural League of the Pacific Coast has been granted the privilege of holding its monthly exhibitions of competitive drawings in the Institute.

The attendance at the School of Design has steadily increased, the enrollment for 1908 being 220, while that for 1909 was 266. The discipline has been excellent and the spirit and zeal shown by the students is most encouraging. The exhibitions at the end of the year were large and varied and were universally commended.

The Art Association grants annually twelve scholarships, or free tuition, to students of the School as a reward for merit, or to assist those having ability who are unable to pay the required tuition fees. It may be incidentally remarked that a number of artists who have achieved successful careers have been assisted in this way.

In accordance with the arrangement entered into with the Julian Academy of Paris, the School annually forwards a collection of the best drawings done during the year for judgment by the officials of that institution, a silver medal and a scholarship being awarded to the best work. A valuable criticism of the drawings is also rendered, all of which is of much practical benefit to the students.

The following gifts have been made to the Association during the last two years: from Mrs. Dora Williams, an oil painting entitled "On the Beach," by the late Virgil

Williams; from Mrs. Philip Verrill Mighels, a collection of costumes for use in the Sketch Class in the School; from Mr. Edgar Walter, two large wall draperies for the School; from Mrs. David Bixler, an oil painting by Karl von Piloty, entitled "Wallenstein on His Way to the Castle at Eger" (this picture, which is quite large, being  $48 \times 60$  inches, is a fine example of the great German painter); from Mrs. Bixler, a collection of twenty-three large photographs of famous frescoes and interiors of churches in Rome, together with eleven engravings of the works of Gustave Doré.

Additions to the Library were as follows: from Mrs. W. H. Barrows, 5 vols., "Decorative Design"; from Sir Henry Heyman, 3 vols. on Art; from City of New York, Catalogue of Works of Art belonging to the City of New York; from the Smithsonian Institution, "The National Gallery"; from Architectural League of the Pacific Coast, "Year Book"; from the Carnegie Institute, "Memorial of Augustus Saint Gaudens"; from the Chicago Art Institute, "Contemporary German Art"; from Mr. William R. Hodges, "Biography of Carl Wimar."

One of the most important gifts made to the Association was that which came in the nature of a bequest from the late Emanuel Walter, formerly of this city. This bequest consists of a valuable collection of oil paintings, water colors, pastels, drawings, ivories, and bronzes, obtained in Europe during the last quarter of a century. An exhibition of this Emanuel Walter Collection, as it has been named, was held in the Institute from December 10, 1909, to January 7, 1910. A printed catalogue of forty pages with numerous illustrations of the most important pictures was issued and will hereafter be made a part of the Association's regular catalogue. In addition to the pictures and other works of art, Mr. Walter bequeathed \$50,000 in money for the construction of a room or rooms, for the housing and care of the collection. After deducting the inheritance tax, the legal fees, and expenses attending the settlement of litigation, insurance, etc., this sum amounts to about



\$40,000. The Board of Directors, in conjunction with Mr. Edgar Walter, who was appointed supervisor of the bequest by the testator, has had plans made for a fireproof annex to the Institute, where the collection will be placed on permanent exhibition in accordance with the terms of the will.

In addition to the work of the Institute as set forth, the Association, at the request of the representative of the United States Government, assisted in obtaining a suitable design for the monument to Commodore Sloat to be erected at Monterey. The Director of the Institute has delivered occasional lectures outside of the School and has corresponded with those desiring information on art topics, and in accordance with the plans of the Association, every aid and encouragement has been lent to art movements and education.

Respectfully submitted,

VANDERLYNN STOW,  
President.

## HASTINGS COLLEGE OF THE LAW

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SAN FRANCISCO, July 1, 1910.*To the President of the University,*

SIR: I beg to report that the two years last past have been a period of great progress in the Hastings College of the Law, particularly by reason of the fact that the Legislature of 1909 appropriated the sum of \$6,800 for the purpose of renting and equipping quarters for the use of the College. With this money the directors rented the twelfth floor of the Whittell Building in San Francisco for two years and expended a large amount of the appropriation in books, so that we now have quite a nucleus for a library. Our quarters comprise three class rooms, a library room, a room for the Dean, and one for the Registrar. The number of students who enrolled with us this year was 119—this being one of the largest registrations in the history of the College. The instruction has been very satisfactory, and the students have greatly profited by their work by reason of the increased instrumentalities furnished them.

Next year, in addition to my usual course of lectures in Real Property given to the Junior Class, I shall give work in Real Property in the Cases to the Senior Class. There has been this year among the students more investigation and more interest than I have ever before known in the College.

Respectfully submitted,

EDWARD R. TAYLOR,

Dean.

## MEDICAL DEPARTMENT IN SAN FRANCISCO

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SAN FRANCISCO, July 1, 1910.

*To the President of the University,*

SIR: I beg to present the following report of the Medical Department of the University.

Since the earthquake and fire of 1906 the out-patient dispensary has been maintained at the college building. As the neighborhood is unsuited to the purposes of a dispensary, the out-patient department has not afforded adequate opportunities for the instruction of the students in this branch of medical education. It is of great importance that as soon as possible an out-patient department be established in a densely populated district. The building should be large enough to contain numerous rooms for the various clinics and a well equipped clinical laboratory.

The removal of the dispensary from the college building would liberate space for laboratories now urgently needed for instruction in applied pathology, laboratories of experimental medicine and surgery, and clinical laboratories for the routine work of the hospital.

The abandonment of the City and County Hospital by the municipal authorities of San Francisco made it necessary that many of the patients cared for by the City should be sent to various private institutions. During the past two years a daily average of about thirty of the City's patients have been cared for at the University Hospital. During the next year it is probable that the new City and County Hospital will be completed. It is important, therefore, that some systematic plan for the organization of the University Hospital shall be determined upon.

The curriculum of the Medical Department may be divided into Anatomy, Physiology (including Pharmacology), Pathology, Hygiene (including Bacteriology), con-

stituting the part devoted to the first two years; and the clinical or practical chairs of Medicine, Surgery, Obstetrics, Gynecology, and the specialties, eye, ear, etc. In the main the subjects of the first two years are under the charge of men giving their entire time to the University and devoting themselves to teaching and research. A medical school cannot be considered upon a university plane until all of its departments are manned in this way. However good the intentions of men engaged in active practice, however lofty their ideals, and however devoted they may be to their university work, it is impossible for instruction and research in the clinical branches to flourish as they would if these selfsame teachers were not called away by their private professional duties. The needs of education in modern scientific medicine demand that all members of the teaching staff, whether of the first two years or the last two years, shall have a philosophical point of view, a scientific method, academic ideals and enthusiasm in the pursuit of truth. If the teachers are not themselves investigators, the students will be mere artisans in medicine.

It would seem that the chief needs of the Department are therefore:—(1) the establishment of a well equipped dispensary in a suitable location; (2) the organization of the University Hospital on a permanent basis; (3) the adoption of a plan of growth whereby the clinical departments may all be ultimately placed upon an academic plane.

It is important that the work in Morphological Pathology in connection with the clinical departments be amplified. Until the present year practically all of the instruction in Morphological Pathology ended with the second year. The professor of Pathology, with the help of sufficient assistants, should conduct the applied Pathology of the clinical years, as well as the fundamental instruction in the preclinical years.

Respectfully submitted,

A. A. D'ANCONA,

Dean.



## MEDICAL DEPARTMENT IN LOS ANGELES

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LOS ANGELES, July 1, 1910.

*To the President of the University,*

SIR: I have the honour to submit to you the first report on the Los Angeles Medical Department of the University.

The Department of Medicine in Los Angeles ends its first year under the University in June, 1910, but at the same time it is finishing its 25th year of medical instruction, having existed for 24 years as an independent medical college, where diplomas were granted by the University of Southern California. Since its affiliation with the University of California there has been a noticeable improvement in the instruction given by the teachers and in the work done by the student body. In taking over the College of Medicine of Los Angeles, the University placed the first two years' work in Berkeley with the students from the San Francisco Department and left the last two, or clinical year, to be continued in Los Angeles. With the instruction given in Berkeley, medical students will come to the South well equipped to enter the third and fourth years; and they will of course have the advantage of an option for the clinical years as between San Francisco and Los Angeles.

There is abundant clinical material in this city to warrant the University in maintaining a strong medical centre and to enable it to give adequate medical instruction. It would be impossible for any one department of the University to utilize the clinical material of both San Francisco and Los Angeles on account of the great distance and conditions which separate these two centres. The problem of

medical education in California is somewhat different from that presented in other states, on account of the extensive territory of the state and the topographical conditions of the north and south. It would seem wise therefore, that our State University, if it is to set the medical standard, should have a medical college in both sections of the state. Whether or not a full four years' course should be carried on in each place remains for the future to determine. Certainly there is every argument in favor of continuing the two separate clinical years. Our college here is affiliated with hospitals in such a way as to strengthen this position. We have the medical direction and appointment of the staff of the Children's Hospital with 35 beds, the Barlow Sanatorium with 40 beds, the appointing of the staff at the County Hospital with 200 beds assigned to us, and the Graves' Dispensary for clinical teaching, averaging 80 patients a day.

The total number of students in this department this year is 57: fourth year, 10; third year, 14; second year, 20; first year, 13. The 13 of the first year were matriculated through our department at Berkeley. The standard of some of these during their first term at Berkeley was not sufficient to have them continued.

Each year brings into our advanced classes students from the East and other parts of the United States, who for reasons of health in their families, or because attracted by climatic advantages, come here to finish their medical course. In looking over this number it would seem that twenty-five per cent. of our third and fourth year students come from eastern colleges.

Our actual needs for the next two years to make this department what it should be for improved teaching are these. First, increased facilities for dispensary work: in Graves' Dispensary between eighteen and twenty thousand visits in a year are made by patients. This out-patient department for the poor of our city has increased so enormously during the past two years that it is difficult to

take care of more cases without additional space and equipment. This could be easily acquired by utilizing the part of the main building of the college which is adjacent to the dispensary, with a small outlay for necessary equipment. Second, salaried instructors for teaching in the Pathological Laboratory, and for teaching in clinical microscopy. Third, a University Hospital owned and controlled by the University. Los Angeles is well supplied with private hospitals for people of means, but there are few beds for the sick poor outside of the County Hospital, which is controlled by the County authorities. There is an excellent opportunity here to accomplish great good for the people of this section, as well as for medical education, if the University would start a hospital (with the teaching privileges of course) for those in reduced circumstances. Such an institution would be well supported by people of means here who would add to its endowment because they already recognize this great need; and it is possible that the University could secure from the City the care of its emergency cases. It seems absolutely necessary that the Medical Department of the University should have its own hospital as well as dispensary and laboratory.

There is one more suggestion to be added. The University, in the near future, should provide certain scholarships for her graduates, who have distinguished themselves in the medical course. With this distinction might go an appointment on the staff of the hospital for a year or more and thereafter an allowance to continue work for one year in Europe. In this way there could gradually be developed a group of progressive, well-trained medical men, who would doubtless direct the medical teaching on the Pacific Coast.

Respectfully submitted,

W. JARVIS BARLOW,  
Dean.

## DENTAL DEPARTMENT

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SAN FRANCISCO, July 1, 1910.

*To the President of the University,*

SIR: I submit herewith the following report for the Dental School of the University of California for the period beginning July 1, 1908, and ending June 30, 1910.

Following the example of the Medical Schools there is a strong tendency throughout the United States toward university control of dental schools for the purpose of standardizing them and effectually removing them from the temptation to financial competition with other schools. The enrollment has been materially lowered by strictly maintaining the requirements for admission.

The student body, though isolated from the parent organization, has been encouraged to adhere to the general policies of the Associated Students of the University of California, in exercising jurisdiction over its members in accordance with the college honour system. The students have arranged for a course of popular lectures not included in the dental curriculum but of genuine value, and they have created an endowment fund, which will unquestionably develop into its full maturity, \$15,000, in time.

The action of the Academic Senate in adopting a resolution, placing the supervision of the enrollment of students in all departments in its hands, was preceded by a request from us that we be relieved of this responsibility. The request was made in the belief that this matter should be entirely in the hands of the university authorities at Berkeley. This course will unquestionably react to the greater good of the University by unifying the inter-



ests of all its schools and colleges, and of the profession by insuring that properly qualified persons shall determine the preliminary educational status of the student. The unifying of preliminary standards is in accord with the policy of the Dental Faculties' Association of American Universities.

It is important to teach the student the responsibilities of office practice, the necessity of keeping definite office hours and the duty he owes the public, in connection with the practice of dentistry. With these ends in view we maintain a semblance of individual office practice in the Infirmary. Students are required to keep infirmary hours in full, to be on hand to treat cases that may present themselves, to keep appointments regularly, and to observe the customary methods of attention and a proper moral attitude toward their patients. In the treatment of cases, they are particularly required to follow the methods of asepsis and sterilization for the arrest and prevention of dental disease.

The curriculum at the present time provides no elective work, all being prescribed. The short period of three years of instruction necessitates a full prescribed course in order that the student may be properly prepared in dentistry. There is however a need in the dental curriculum for an increase in opportunities for general culture and for scientific studies. Because of the overcrowded condition of the course the students are generally not in as good physical condition at the completion of their studies as the average university student.

The practice of Dentistry is not conducive to good health owing to its confining nature, and any effort to encourage exercise and athletics during the term would eventually produce a body of men possessed of better physique and character than now prevails. The lengthening of the course in dentistry and the medical examination prescribed by the University upon entering are both important factors in obtaining these results.

During the session of 1909-10, the Professor of Operative Dentistry established a plan of requiring each student to present a "year patient," a case, assigned to him during the regular term which must include all classes of dental work. A theme including diagnosis and prognosis is presented by the student. At the end of the term the case and theme are presented for examination and comparison and the student is graded upon the case. This shows the progress of work over a period of several months, develops the student's judgment, and requires him to complete in a satisfactory manner all the dental service that should be properly rendered in the case.

Our standards are higher than they used to be. Since the Board of Regents has assumed control of the department, the regular sessions of the College have been conducted concurrently with the regular sessions of the academic departments. With the ambition to maintain high educational standards came the necessity of providing the best facilities for teaching in both didactic and practical work and a further elaboration of courses. In every instance where changes have been made the courses have been lengthened in scope and character and the time of the student is taxed to the utmost to complete the work satisfactorily. The course in Bacteriology and Pathology has been extended from one to three periods per week each semester. The course in Dental Technics has been increased to six full mornings a week with salaried instructors in charge. This is probably the first great step toward solving the problem of preparing the student for clinical work, as the work in this department is fundamental to all branches of practical dentistry. The clinics have been concentrated in full half-day sessions instead of broken full day sessions, as was the way prior to 1909-10, with the result that a greater amount of clinical work has been accomplished in a more satisfactory manner, and the patronage of the clinic has exceeded its ability to provide service. The appointment of an infirmiry matron

during the regular session provides better and more prompt and courteous service for the patients and gives the instructors more time at the chair in teaching and assisting the students in practical work.

But of regard to the importance of Radiography in dental diagnosis, particularly in the field of Surgery and Orthodontia, the sum of \$1000 was appropriated from the funds of the department for the establishment of an X-Ray laboratory. A complete equipment has been installed and placed under the supervision of Dr. Geo. R. Hubbell. This will probably provide revenue for its own maintenance and offer every facility for increasing the efficiency of these departments and materially advancing the school in the field of research work. A double stereopticon lantern with microscopic attachments, and a new Leitz microscope for research work have been added to the equipment.

The library has increased during the past two years by 350 volumes. Twenty dental journals (which are bound and placed on the shelves at the end of each year) are regularly received.

Dr. Luis Lane Dunbar, Professor of Operative Dentistry and Dental Histology and Dean 1889-1899, and Professor Emeritus until December 1908, died on December 30, 1908. In his death the College lost an earnest supporter and advocate.

There has been a growing desire on the part of the public to learn more in regard to their mouths and teeth than is ordinarily given them through the only other legitimate and ethical channel, the family dentist, and in pursuance of the general policy of the University as exemplified in the agricultural demonstration train and the university extension courses, a series of lectures has been given to the Parent Teachers' Clubs in the public schools in the Bay Cities, in the interests of public health. These lectures have been limited to discussion of the development and care of the teeth. Where facilities have made it possible they have generally been given with stereopticon illustrations and have been well attended.

The desirability of establishing a free dental clinic for poor school children was first presented to the San Francisco Dental Association, by the College of Dentistry. The Society has taken up the matter and has received encouraging support from the Board of Education and the Associated Charities.

During the Academic year 1908-09, the Technic Club, whose membership includes the teaching staff of the Dental School, was reorganized and named the C. L. Goddard Technic Club, in respect to the memory of Dr. C. L. Goddard, who was the organizer in 1902. Guests, including the members of United States Army Dental Corps, are invited to attend the meetings. The objects of the Club, which have been fully carried out at the regular monthly meetings, are to promote a greater co-ordination in the various sub-departments and to investigate and discuss problems relating to dentistry and dental education. This has resulted in unifying and harmonizing the work of the whole school. Topics for the programme are definitely assigned to the various members of the faculty two years in advance.

The College of Dentistry tendered its resignation to the National Association of Dental Faculties on April 27, 1908, because we realized that the Association (many of whose members are dominated by the spirit of commercialism) could no longer guarantee the standards of dental education. As reported to you in 1908, the effort to create a conference of the university dental schools in this country for the sole purpose of maintaining better standards of dental education has resulted in the organization of the Dental Faculties Association of American Universities. The following schools hold membership therein: Dental Department University of Pennsylvania, Harvard University Dental School, Dental Department University of Minnesota, Dental Department University of Michigan, Dental Department University of Iowa, and the College of Dentistry, University of California. Two other schools,



Nebraska and Illinois, are eligible, but have not yet seen fit to join this Association. The progressive results of two meetings already held are manifest in the University of California by the adoption of a resolution by the Academic Senate on November 17, 1909, whereby all candidates for the Degree of Doctor of Dental Surgery after June, 1915, must acquire a Junior Certificate before registering in the dental school. The University of Michigan has established a course of six years of university work leading to a B.S. and D.D.S. degree and the University of Minnesota is proposing to require one year of academic work as an admission requirement for the dental school.

Respectfully submitted,

JAS. G. SHARP,  
Dean.

## DEPARTMENT OF PHARMACY

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SAN FRANCISCO, July 1, 1910.

*To the President of the University,*

SIR: This department had enrolled for 1909-1910 seventy students. This is a decided increase over recent years. Facilities for teaching have been greatly improved by additional equipment placed in the laboratories, made possible, in part, by donations, the college having received \$600 by gift in the last two years. Part of this money was used for the purchase of furniture and instruments for the microscopic and third year laboratories. The remainder, amounting to \$300, is now being expended for additions to the museum, which is not a collection of medicaments of the past, but an exhibit of materia medica for practical study on the part of the student. The library has been augmented by a gift of 273 volumes from the collection of W. T. Wenzell, Professor Emeritus.

The changes in the faculty have been as follows: Professor F. W. Nish now occupies the chair of Pharmacy made vacant by the death of Professor W. M. Searby, and Dr. H. M. Simmons has been appointed to the instructorship in Materia Medica and conducts that branch in conjunction with his toxicological work.

Notwithstanding the fact that colleges of pharmacy are plentiful in this country, students from distant points have sought instruction in this college, several having been enrolled from Ohio, Michigan, Oklahoma, British Columbia, and the Republic of Panama. It is the endeavour of the faculty to make the teaching broad and to encourage pharmaceutical progress.

Respectfully submitted,

FRANK T. GREEN,

Dean.

## WILMERDING SCHOOL

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SAN FRANCISCO, July 1, 1910.

*To the President of the University,*

SIR: The progress of the Wilmerding School during the past two years has continued along lines laid down in my earlier reports, with no departures of especial importance in matters of curriculum or internal administration. The enrollment has kept up to the full capacity of the school, the maximum number (277) having been reached in 1908-1909, when several of the departments were overcrowded. Since then the number has been reduced to 230, where we prefer to keep it for the present. We have been unable to carry into effect our desire to add a new department of House Painting and Decorating, referred to in one of my earlier reports, owing to the reduction of our income on account of the diminished earnings of the pool in which our funds have been included for investment since the earthquake of 1906. In fact, it might have been necessary to discontinue one or two of our present departments had it not been that we were able to lease the Potrero Block No. 138 and the finished portions of our new building. The San Francisco Fire Department vacated these premises March 1, 1910, but it is hoped that the loss of income from that source will be made up by increased earnings from our invested funds.

The late Frederick B. Ginn bequeathed the sum of \$20,000 for the maintenance of orphan boys in the Lick and Wilmerding Schools. In the settlement of his estate the executors, Mrs. Josephine E. P. Ginn of Ventura, California, and Mr. Edwin Ginn of Boston, Massachusetts,

very generously subscribed an amount equal to the Massachusetts inheritance tax. Through their kindness and generosity the full amount of \$20,000 has been turned over to the trustees of the Lick School, to be administered by them. During the year 1910-11 it is expected that there will be five boys in attendance at the Wilmerding School as beneficiaries of this fund.

Respectfully submitted,

GEO. A. MERRILL,  
Director.



## MARINE BIOLOGICAL STATION

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SAN DIEGO, July 1, 1910.

*To the President of the University,*

SIR: The chief facts in connection with the work and progress of the Marine Biological Station during the last two years are as follows.

Miss Ellen B. Scripps has added \$200,000 to the gifts previously made by her. Although the money does not come into the actual possession of the Station until the probation of the donor's will, interest on it at six per cent. is now available for the running expenses of the Station. The gift is to stand as an income-producing endowment. Miss Scripps further provides by will that under specified contingencies certain other sums, the total amount of which would be determined by the conditions specified, shall come to the Station.

This increase in the income-producing resources of the Station was made on condition that the Scientific Director should take up his residence at La Jolla and devote most of his time to the work of the Station. Professor Ritter consequently moved with his family to La Jolla in June, 1909. It was deemed best that Dr. Ritter's connection with the Department of Zoology of the University should not be fully severed, and an arrangement was concluded whereby certain duties, including a course of instruction at Berkeley each year, should be performed by him and that a portion of his salary, at present one-third, should be furnished by the University.

The first permanent building on the new site near La

Jolla is now ready for occupancy. It is equipped with twelve private laboratories and one large room available for laboratory use by several persons, and it will accommodate about twenty-five investigators. The building is two stories in height, is of reinforced concrete, and is as nearly perfect in plans and construction for the use to which it is to be put as European and American experience with such laboratories could make it. Its cost, including salt-water pumping plant, concrete tower and water tanks, septic tank for sewage, and furniture, will not exceed \$25,000.

During the last year important additions have been made to the scientific equipment of the Station. This has been partly for the work at sea and partly for the work ashore. Nearly all the purchases were made in Europe by Professor Kofoed during his Sabbatical leave from the University. The apparatus is mostly from models that have been developed by the International Commission for the Investigation of the North Sea, our undertaking having no counterpart, so far as its investigations at sea are concerned, in the United States.

Experience has made necessary several rather important changes in the Station's boat, the *Alexander Agassiz*. Her mainmast had to be made shorter and lighter; it was found best to transfer her steering gear from aft forward, and to build a wheel-house and chart-room; a naturalist's house has been built aft; and a new and larger sounding machine, necessitated by the larger sounding cable which comes as a part of the new equipment, is now being installed. This new machine will have its own engine on deck, thus freeing the hoisting engine for its own particular use.

During the past winter about 16,000 trees have been planted on the Station site, probably half of the entire 170 acres being covered. On the mesa portions of the land most of these are eucalyptus, of thirty-three species which have been found to flourish on the sea coast. Pines and ornamental shrubbery have been largely planted on the building site proper. Special effort is being made in favour

of native California shrubs and plants, particularly the unique Torrey pine now extinct except in this locality.

The permanent salaried workmen at present connected with the Station are: William E. Ritter, Scientific Director; Ellis L. Michael, Scientific Assistant; Myrtle Johnson, Scientific Assistant; Nina Waddell, Librarian (on part time); John Dahl, Master of the *Alexander Agassiz*; and Louis German, Superintendent of the Grounds. Non-resident members of the staff, that is persons carrying on research for the Station who receive compensation for their work, but spend only a small part of their time at La Jolla, are: Professors C. A. Kofoed and H. B. Torrey, Zoologists, University of California; Professor C. M. Child, Zoologist, University of Chicago; Professor C. O. Esterly, Zoologist, Occidental College, Los Angeles; George F. McEwen, Physicist and Mathematician, Stanford University; and H. C. Burbridge, Physicist and Chemist, Stanford University.

Respectfully submitted,

WM. E. RITTER,  
Scientific Director.

## THE UNIVERSITY LIBRARY

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: I have the honour to present the following report on the condition and progress of the University Library during the past two years:

The accessions (in charge of Miss Lillian Burt) have been as follows:—

By purchase:	1908-9,	1909-10.
Belcher fund .....	44	17
Denicke fund .....	162	38
General fund .....	3,789	5,323
German Library fund .....	1	.....
Hallidie fund .....	24	11
Jucksch fund .....	15	11
Moffitt fund .....	170	218
Reese fund .....	1,970	1,038
Sather fund .....	493	214
Spreckels fund .....	28	386
Replacement of lost books.....	11	10
By Binding of periodicals .....	1,256	2,431
For Departments .....	950	825
Crocker fund .....	65	61
	8,978	10,583
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By gift:		
Main library .....	2,393	2,367
Weinhold library .....	372	1,335
Departments .....	1,157	204
	3,922	3906
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By exchange: .....	1,094	2,008
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Total volumes received .....	13,994	16,497
Total volumes in the library.....	181,734	198,231

(No deduction is made for lost or discarded books, about 2,200 volumes, which are about balanced by the number of uncatalogued works. The Bancroft Library is not included in this count.)



The receipts of periodicals and serials (in charge of Mr. F. M. Bumstead) are as follows:

	1908-09.	1909-10.
By purchase .....	933	919
By exchange and gift .....	2,136	2,139
	<hr/>	<hr/>
Total .....	3,069	3,058
Unbound pamphlets by gift .....	5,547	4,848

The following noteworthy purchases merit mention:—

In 1908-09:—*Analecta hymnica medii aevi*, 51 volumes; Bates, *The drama*, 20 volumes; Boccardo, *Nuova enciclopedia Italiana*, 32 volumes; Cappa, *Dominación española en América*, 20 volumes; Cumont, *Mystères de Mithra*; Gilleron, *Atlas linguistique de la France*; Graevius, *Thesaurus antiquitatum Romanarum*, 12 volumes; Die Jenaer *liederhandschrift*; Lamarek, *Encyclopédie méthodique*; Botanique, 20 volumes; Lepeintre, *Théâtre française*, 81 volumes; Lucretius, *Codex Vossianus*; Paccioli da Borgo, *Arithmetica*, 1,523; Pigault-Lebrum, *Oeuvres*, 28 volumes; Ranke, *Werke*, 27 volumes; Zola, *Oeuvres*, Definitive illustrated edition in 19 volumes.

In 1909-10:—John Quincy Adams, *Memoirs*, 12 volumes; American digest, Decennial edition, 12 volumes; Biografisk lexikon öfver namnkunnige svenske män, 33 volumes; Comparetti, *Museo italiano di antichita classica*; Florence, *Accademia, Vocabolario*, 19 volumes; Estreicher, *Bibliografia polska*, 17 volumes; Farmer, *Slang*; Nelson's *encyclopaedia*; Pettersen, *Norsk boglexikon*, 1643-1813; Shakespeare, 1632 edition in facsimile.

The periodical sets form the backbone and ribs of a reference collection of books. For some years \$1000 has been set aside annually for the purchase and completion of sets. Among those received, which merit particular mention are the following:

In 1908-09:—Academy, 25 volumes; Archives des sciences biologiques, 11 volumes; Auk., 20 volumes; Ausgaben und Abhandlungen aus dem Gebiete der romanischen Philologie, 99 parts; Bibliothèque des écoles françaises d'Athènes et de Rome, 73 volumes; Bologna, Istituto delle scienze, 212 volumes; Botanische Zeitung, 51 volumes; Dial, 17 volumes; Institut international di sociologie, 11 volumes; Iron and steel institute, Journal, 67 volumes; Journal of botany, 29 volumes; Le Naturaliste Canadien, 34 volumes in 23; Naturae Novitates, 24 volumes; Philologische Anzeiger, 17 volumes; Railway age, 16 volumes; Revue archéo-

logique, 90 volumes; *Revue celtique*, 28 volumes; *Revue des cours*, 25 volumes; Rome, *Reale accademia dei Lincei*, *Monumenti antichi*, 19 volumes; Royal physical society of Edinburgh, 13 volumes.

In 1909-10:—*Bibliotheca botanica*, 15 volumes; *Centralblatt f. d. gesamte Unterrichtsverwaltung in Preussen*, 46 volumes; *Congrès international des Américanistes*, 15 volumes; *España*, 27 volumes; *Essex Institute*, *Historical collections*, 20 volumes; *Financial review*, 29 volumes; *Jenaische Zeitschrift*, 36 volumes; *Journal du droit international privé*, 33 volumes; *Justus Liebig's Annalen*, 244 volumes; *La Nature*, 33 volumes; *Romanische Forschungen*, 21 volumes; Rome, *Istituto di corrispondenza archeologica*, 90 volumes; *Reale Accademia dei Lincei*, *Atti*, 99 volumes; St. Petersburg, *Observatoire physique*, 58 volumes; *Scottish historical society*, 37 volumes; *Stettiner entomologische Zeitung*, 69 volumes; *Zeitschrift, f. d. oesterreichischen Gymnasien*, 53 volumes.

The full work of the Exchange Department will be described by Mr. A. H. Allen, manager of the University Press, to whose successful activity the library is deeply indebted. Among the exchanges which are bound and entered on the accession book are the following:

In 1908-09:—Cairo, *Institut égyptien*, *Bulletin*, 22 volumes; Chile, *Estadística commercial*, 20 volumes; Copenhagen, K. danske Videnskaberneselskab, *Oversight and Skrifter*, 74 volumes; Genoa, *Società ligustica*, *Atti*, 17 volumes; Helsingfors, *Societas pro Fauna et Flora Fennica*, 30 volumes; Kosmos, 31 volumes; Paris *Académie des Inscriptions et Belles-lettres*, *Mémoires*, 77 volumes; British Museum (Natural History), a large number of its publications.

In 1909-10:—American academy, Boston, *Memoirs*, 1793-1908, 13 volumes; Chareot, *Expédition antarctique*, 11 volumes; La Plata, Museo, *Revista*, 14 volumes; Natural History Society of Northumberland, 16 volumes; St. Petersburg, *Comité géologique*, 35 volumes.

In 1908-1909:—Gifts of money were made by Mr. James K. Moffitt, \$500 for History, Literature, and Philosophy; by Mr. E. C. Hutchinson, \$100 for works on Statistics; and by Mr. Robert Belcher, \$50 for California literature.

In 1909-10, the friends of Mary Lake presented \$665 to be expended in the purchase of modern English literature as a memorial to this veteran educator.

Gifts of books in 1908-09 were made by Dr. S. Litman, 96 volumes; Miss G. E. Pearne, 21 volumes; and the estate of Mme. Thérèse F. Colin, 89 volumes; Mrs. J. P. Lavery presented the

beautifully engraved Anacreon of 1781: Mr. J. P. C. (who wishes the gift to remain anonymous) gave a duplicate set of the California Reports, 151 volumes; from Miss K. C. Radford was received a set of the Institution of Civil Engineers, 170 volumes; and from Capt. W. Stewart Smith, the American Society of Naval Engineers, 20 volumes; the important and valuable works of Gustaf Retzius were presented by the author; from Mr. Richard J. Bush of San Francisco came the possibly unique copy of "The Esquimaux", 1866-67, a newspaper edited by J. J. Harrington and published as manuscript at Port Clarence, Alaska. It is historically interesting as containing accounts of exploration made by order of the Western Union Telegraph Company.

For many years the library has been the custodian of the water-color paintings of the Birds of the Pacific Slope by Col. Andrew J. Grayson, as well as his manuscript notes regarding the same. By bequest of Mrs. Frances J. Crane of St. Helena these have become the property of the University. In 1909-10, Mr. Archer M. Huntington, president of the Hispanic Society of New York, presented a complete series (60 volumes) of his facsimile reprints of rare Spanish manuscripts and books. The very large collection of newspaper clippings—made during forty years by Warren B. Ewer—the veteran editor and publisher, was given in March, 1910, by Mrs. Nellie Blessing Eyster. We presume that this mass of material, when properly classified and arranged, will prove of great service to many people and in many lines of investigation.

Emeritus-professor W. T. Wenzell of the College of Pharmacy has presented a number of valuable art works, including an edition-de-luxe of Picturesque California. The copy of the *Boston Independent Ledger*, 1778-1780, bequeathed to us by the late F. B. Ginn, was received in May, 1910. Mr. J. Pierpont Morgan gave the beautiful catalogues of his notable manuscripts and early printed books. Only 170 copies were issued, and for private distribution. Mr. Justice Lucien Shaw has continued to favor us with his personal set of Supreme Court briefs; 1602 have been received during the last two years.

We have suffered some losses. No complete inventory of the library has been taken for two years, as it seemed wise to concentrate effort upon other matters. But the unauthorized abstraction of books and unbound numbers of periodicals continues, and instances of mutilation occur now more frequently. This most distressing condition will be greatly alleviated in the new library, where for the first

time the books will be under proper control and more adequate supervision.

Expenditures have exceeded the budget allowances on the general fund account in both years. The deficit in 1908-09 was due to work sent to the university bindery to keep the force employed. The deficit in 1909-10 is due partly to this same cause, partly to our getting off book orders earlier than usual in the year, and also to the activity of our agents in supplying back orders. The librarian drifts always in dread uncertainty between the Scylla of deficits and the Charybdis of lapsing appropriations. Seven thousand dollars in lapses were lost by the library in the preceding seven years. Given a straight non-lapsing appropriation, the competent librarian will not be at the mercy of inconstant wind or current, but will be able to steer and to trim or reef his sails with intelligent foresight. The present method as applied to library finance is not commendable, and has been abandoned elsewhere.

Estimates for 1909-10 show the circulation and use of books (under the supervision of Mr. Ulrich Graff) to be:

For home use:

Faculty .....	14,000	
Students .....	70,000	84,000
	<hr/>	<hr/>

For library use:

Mornings .....	43,000	
Afternoons .....	57,000	100,000
	<hr/>	<hr/>

In Summer Session, 1909.....	6,000	
Total .....	190,000	vols.

The actual use is far greater, as readers enjoy free access to the shelves. The unrecorded interior use can certainly not be less than twice the recorded "library" use of "reserved" books—or 200,000 volumes, and consequently the total would approximate 400,000 volumes.

The entire series of topographical maps of California and Nevada issued by the United States Geological Survey has been systematically arranged by Mr. Graff, and



has been bound in ten volumes, in which ample space has been reserved for inserts. This set is intended for reference only.

Mr. Graff has prepared detailed plans and specifications for the loan desk in the Doe Library; and has submitted careful reports on the time schedules at the loan desk; on the time consumed by various methods of delivery from book stack to loan desk; and on writing machines for library use. This last report was much enlarged and, under the title—*The Typewriter, a Study*—was read before the California Library Association, in April, 1910. The present charging system for loans has been modified and improved during the last ten years in accordance with the suggestions of Mr. Graff.

In 1894 the Board of Regents approved the plan of interlibrary loans, limiting it to loans between the University and State libraries. In 1896 loans with the California Academy of Sciences were approved, and in February, 1898, the privilege was extended generally to libraries of the United States willing to reciprocate.

	Loans.	Borrowings.
1898-1899 .....	10	7
1899-1901 .....	17	21
1901-1902 .....	16	16
1902-1903 .....	28	16
1903-1904 .....	27	15
1904-1905 .....	19	19
1905-1906 .....	36	9
1906-1907 .....	44	18
1907-1908 .....	77	10
1908-1909 .....	86 (219 vols.)	27 (67 vols.)
1909-1910 .....	74 (225 vols.)	26 (72 vols.)

This important aid to sound scholarship is hampered by the considerable cost for expressage which is entailed upon the borrower. The establishment of a library rate, or of a parcels post, would be thankfully welcomed. For three and one-half years the Wells, Fargo Express Company carried our loans at one-half rate, but felt itself compelled by law to discontinue the favor October 1, 1909.

The order department is in charge of Mr. A. B. Smith. The increasing funds of the general library, and book purchases for departmental or outside libraries (in 1909-10, 55 requisitions for 28 departments, amounting to \$4,000) have made the load a very heavy one for the department (consisting of a single individual) to carry. The mere routine work of writing orders, checking bills, filing records, etc., is not inconsiderable. But the more difficult, tedious labor of checking up duplicates: of identifying separates and extracts called for, and seeing that they are catalogued when already in the library; the correction of order slips (frequently misleading and imperfectly made out) as to author, title, best or latest edition, etc.—all of this requires bibliographical training of high order, and consumes time and energy. But the work has been so efficiently performed that an unintentional duplicate is a rare occurrence.

The current work of the catalogue department (Miss Pauline Gunthorp in charge) is well up to date, and with the exception of the Voorsanger collection of Semitic books—which awaits transliteration, all special collections have been catalogued. We are furnishing the Library of Congress with copy for cards for all of our own university publications. The application of the multigraph to catalogueing, as used at the John Hopkins University, is under consideration.

In the shelf department (Mr. R. C. Woodmansee in charge) large accessions and scanty shelf room have necessitated shifting large sections to preserve consecutive order of the various classes of books. Within the last twelve months fully one-half of the library has been relocated. The renumbering of books has followed closely the expansion of the classification. The problem of moving the library to its new quarters has been carefully considered. Associate Professor E. B. Durham kindly worked out a plan of aerial transport, but the cost of the plant seemed too great to permit of its adoption. Mr. Woodmansee has submitted

a method by which, with minor changes, the books can be transferred in good order and rapidly, and with a minimum of expense.

The binding department is under Mr. F. M. Bumstead. The establishment of a university bindery on the campus has been fully justified. The work is highly satisfactory as to quality, and is promptly done, being returned often within thirty days. Rush books can be returned in forty-eight hours, and any one of the 500 volumes usually in the bindery can be consulted if necessary. Mistakes are easily rectified, and difficulties in collation adjusted without delay. From March 13, 1908 (the date of establishment) to June 30, 1909, 3685 volumes were bound at a cost of \$3851.72; and during 1909-10, 5005 volumes were bound costing \$5,140.90. The average cost per volume is rather high, as a considerable portion is bound in cloth. This could be reduced by an enlargement of the plant, permitting a more economic handling of material, in larger quantities. With the immense receipts through exchange, mostly unbound, and with the gradually increasing wear of books, the library could furnish double the present number to be bound.

Miss Beatrice J. Barker resigned December 31, 1908, to become head cataloguer at the University of Oregon; Miss Anna K. Fossler, after nine years of conscientious service resigned July 1, 1909, to join the staff of Columbia University; and Miss Anne W. Rosenmüller left us July 1, 1909, to become Mrs. Berthold Wuth. Miss Stella Bennett joined our catalogue force February 1, 1909. Miss I. N. Anderson took charge of the serials department June 1, 1909, but resigned July 1, 1910. We reluctantly accepted the resignation of Miss Inez A. Greene, who gave exemplary service from August 1, 1909, to June 1, 1910.

Library bulletin no. 17 was issued in June, 1910. It is an attempt by Reference Librarian, Mr. Mead, at an exhaustive Bibliography of George Berkeley, Bishop of Cloyne. We hope to prepare and to publish in 1912 a much needed enlarged edition of library bulletin no. 1. The

expansion of the classification has been worked out and applied to more than half of the library, and the shelf-list is in progress. Notwithstanding our ever-enlarging activities and the growth of our resources, no increase in the number of assistants has been made for two years. This indicates efficiency and cordial coöperative effort among the members of the staff.

A bronze bust by Peano of the late Regent Reverend Horatio Stebbins, the gift of the Unitarian Club of California, was received by the library in January, 1909. A beautifully illuminated memorial of Reverend Isaac H. Brayton, veteran educator, whose College School was inseparably connected with the College of California, was received in May, 1910, from Miss Louise Ely Brayton. The memorial with its artistic carved frame is the work of students of the Point Loma Art School.

The foundations of the Doe Library were completed in 1908, the cornerstone being laid with appropriate ceremonies on Thanksgiving Day. This magnificent edifice, now closely approaching completion, is the visible evidence of vastly increased opportunities of service by the library to the University's intellectual needs. Towards the satisfaction of these needs, I unhesitatingly pledge the devoted effort of every member of the library staff.

Respectfully submitted,

J. C. ROWELL,  
Librarian.



## ACADEMY OF PACIFIC COAST HISTORY

(HUBERT HOWE BANCROFT COLLECTION)

BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: Herewith I present my fifth annual report as Honourary Custodian of the Bancroft Library.<sup>1</sup>

*Staff.* During the year the Staff of the Library, maintained by the Academy of Pacific Coast History, has consisted of the following persons:

Frederick J. Teggart, Curator.

Porter Garnett, Assistant Curator.

Charles Henry Cunningham, Assistant.

Adolph van Hemert-Engert, Assistant.

Alexander Edward Wrottesley Salt, Assistant.

Mr. Garnett's time has been occupied, as previously, in attending on readers, caring for the newspaper collection, and in technical supervision of the printing of the publications of the Academy. Each of the student assistants gives seventy-five hours per month.

*Condition of the Library.* Manuscripts. Special attention has been given, in the course of the year, to the large mass of unbound manuscripts. Approximately 10,000 of these have been examined, put in folders, endorsed, classified, and arranged in filing cabinets. Catalogue cards have been made for about one-third of this number; and, by the kindness of Dr. A. L. Kroeber, cards have also been made for the manuscripts that relate to Indian languages.

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<sup>1</sup>Appointment, "until further notice," November 25, 1905.

**Books.** The primary need of the Library, which was entirely unclassified when purchased, has been such a classification as would permit the fullest use of its resources. This could best be supplied by one person arranging the entire collection. The Curator has, therefore, devoted much of his time to this object. The classification is now felt to be as satisfactory as it can be made until the Library is catalogued and the books permanently numbered. As yet no provision has been made for this work.

**Maps.** The collection of loose maps has been re-classified and catalogued.

**Newspapers.** An appropriation by the University Library Committee has provided for binding the current volumes of the more important dailies.

*Additions to the Library.* **Manuscripts.** While no original manuscripts have been purchased during the year, important additions have, nevertheless, been made. An examination of the Californiana transferred from the University has shown the existence of a very remarkable group of original manuscripts—in the “Cowan Collection”, relating to the exploration of the interior of California between 1775 and 1830. Mr. A. H. Allen has presented two diaries of his grandfather, Joseph N. Allen; one is the record of a voyage from New York to Central America in 1850-51, the other of a trip overland to California about 1870. Mr. Warren Cheney has presented 53 volumes of diaries and account books kept by John A. Chaffee and J. P. Chamberlain, of Tuolumne County, California, beginning in 1841 and coming down to 1903. Mr. Nathan Kingsley, of Austin, Minnesota, has presented the Journal of Nelson Kingsley, containing an account of his voyage to California in 1849.

Important additions have also been made to the Library in the form of transcripts of documents existing in other collections. Dr. D. E. Smith spent the summer of 1909 in Mexico and procured for the Academy copies of a considerable number of documents, including some of great

importance relating to Gaspar de Portolá, the first Spanish governor of California. Professor H. Morse Stephens has obtained in Spain copies of a most important series of diaries and other extended documents relating to the exploration of the Pacific Coast by the Spaniards in the second half of the eighteenth century. The Curator has secured copies of two diaries of the Portolá expedition of 1769-70 from the Sutro Library in San Francisco; and has made arrangements for having copied other documents in the John Carter Brown Library and the New York Public Library.

Books. The books relating to California in the General Library of the University have been transferred to the Bancroft Library and incorporated in it. The consolidation of the other departments common to the two libraries, such as the history of Mexico, has been deferred owing to the limitation of space in the present quarters of the Bancroft collection.

At the beginning of the present college year the University Library Committee made a special appropriation of \$500 for the purchase of books required in connection with the work carried on in the Bancroft Library. It was found necessary, however, to expend the greater part of this sum in buying expensive books, such as the *Memoirs of John Quincy Adams*, which, though they are indispensable to our students, lie outside the immediate field of the collection. As a consequence little has been effected toward filling in the literature that has appeared during the last twenty years. Out of the funds of the Academy there has been purchased a small number of important works, like the *Novísima Recopilacion de las Leyes de España*. Madrid, 1805-29. 6 volumes.

In exchange for the Publications of the Academy a large number of historical societies have begun to send their reports. The volumes so received have, in most cases, been turned over to the General Library of the University.

Maps. From President Wheeler the Bancroft Library

has received a copy of Matthias Seutter's *America*, published by Johan Michael Probst, Augspurg, 1784. This map does not appear in the catalogue either of the British Museum or the Library of Congress. It is of striking interest as showing how late the insular theory in regard to California persisted.

*Use of the Library.* The use of the Library has grown steadily during the year. The general public is becoming better acquainted with its resources, and constant demand is now being made for access, especially to the files of newspapers. There has been a notable increase in the number of historical students resorting to the Library from various parts of the United States. Some of those making use of the Library during the year have been:

Edgar H. Adams, New York. Author of "Adams' official premium list of United States private and territorial gold coins." New York, 1909.

Herbert E. Bolton, Professor of History, Stanford University.

Miss Katharine Coman, Professor of Political Economy, Wellesley College.

Zoeth S. Eldridge, San Francisco.

T. C. Elliott, President of the Inland Empire Historical Society.

Fr. Zephyrin Engelhardt, O. F. M. Author of "Missions and Missionaries of California." San Francisco, 1908.

Joseph L. King, San Francisco.

James Ford Rhodes, New York.

Irving B. Richman, Muscatine, Iowa. Author of "Rhode Island", in the American commonwealth series.

The departments of the University now sending students to the Library include Agriculture, Anthropology, Botany, Economics, Education, English, and Geology. Instructors in the University—outside of the Department of History—who have individually made use of the collection during the year, are, Professors Barrows, Bransby, Jepson, Jones, Reed, and Setchell.



The principal use of the Library is that made by the Department of History. Two historical seminaries have been conducted during the year with direct reference to the material in it: Dr. D. E. Smith's seminary on Spanish History, and Mr. Teggart's seminary on Pacific Coast History. The result, so far, of the work carried on may be judged from the following list of Doctor's theses which have been written principally from material in the Bancroft Library:

J. R. Robertson. From alcalde to mayor. California, 1908.

R. W. Kelsey. The United States consulate in California. California, 1909.

D. E. Smith. The viceroy of New Spain. California, 1909.

J. B. Newell. Slavery and disunion in California. Harvard, 1909.

Lucile Eaves. California labor legislation. Nebraska, 1910.

W. C. Woodward. History of political parties in Oregon. California, 1910.

The following theses are also in preparation:

A. E. W. Salt. The Manila galeon.

*Publications.* The Academy of Pacific Coast History has provided funds for issuing a series of Publications, of which the following have appeared during the past year:

No. 1, The San Francisco Clearing House Certificates of 1907-1908; by C. C. Plehn.

2, The Official Account of the Portolá Expedition of 1769-1770; edited by F. J. Teggart.

3, The Diary of Gaspar de Portolá During the California Expedition of 1769-1770; edited by D. E. Smith and F. J. Teggart.

4, The Narrative of the Portolá Expedition of 1769-1770, by Miguel Costansó; edited by A. van Hemert-Engert and F. J. Teggart.

5. The United States Consulate in California; by R. W. Kelsey.
6. Diary of Patrick Breen, one of the Donner Party; edited by F. J. Teggart.
7. Papers of the San Francisco Committee of Vigilance of 1851, I; edited by Porter Garnett.

These items indicate sufficiently the scope of the Academy's Publications as now planned. The most noticeable element will be original documents relating to the Spanish exploration of the Pacific Coast and the settlement of California, and to significant events in the American period. It is not planned to include in the series any studies of less extent and importance than doctor's theses. The Spanish documents mentioned above are printed with text and translation on opposite pages; every effort has been made to secure an absolutely accurate text and the translations have been carefully revised by the Curator.

It has not been found desirable to restrict the Spanish documents printed to such as are preserved in the Bancroft collection, it is planned to include all the significant documents bearing on the beginnings of the history of the state that can be found. This policy presents some difficulties—for it makes necessary, on the one hand, the determination of what records were made, and on the other, the discovery of where these records are now preserved. For example, when the Mexican archives were examined by Dr. Smith last summer he found no narratives of the Portolá expedition; in the Spanish archives at Seville Professor Stephens found the diary of Cañizares; the Bancroft Library has Portolá's diary; the Sutro Library, San Francisco, has the diaries of Costansó and Vila; the Ayer Library, Chicago, has Fr. Serra's diary; and the New York Public Library the very important Crespi diary—all of the same expedition. Manifestly a real service will be done for the history of California by the publication, in one series, of these widely scattered documents.

In addition to the Publications of the Academy of Pacific Coast History, various papers based upon materials in the Bancroft collection have been prepared for publication during the year.

By D. E. Smith. Don Gaspar de Portolá. *Sunset Magazine*, October, 1909.

The Viceroy of New Spain in the eighteenth century. Annual report of the American Historical Association.

By F. J. Teggart. Notes supplementary to any edition of Lewis and Clark. Annual report of the American Historical Association.

The circumstance or the substance of history. *American Historical Review*, July, 1910.

The Curator of the Academy of Pacific Coast History has also prepared a systematic index of documents relating to the Spanish exploration of California and the Pacific Coast, showing where these documents are to be found; and a dictionary of words and meanings occurring in Spanish documents which are not usually found in Spanish dictionaries.

Respectfully submitted,

FREDERICK J. TEGGART.

Custodian of the Bancroft Library.

## THE UNIVERSITY PRESS

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BERKELEY, November 25, 1910.

*To the President of the University,*

SIR: During the two years' period ending June 30, 1910, the work of the University Press has grown rapidly, and the capacity of the University Printing Office has hardly kept pace with the demands made upon it by the University's many publications. The Superintendent of the Printing Office, by unremitting efforts, has given every service that the facilities at his command permitted, but the University's printing has constantly been a severe tax upon his force and equipment.

Since July, 1908, three series of publications have been added, to provide means of publication for work in mathematics, modern philology, and psychology, and a fourth series, in history, is prospective. The annual announcements of the professional departments of the University in San Francisco, dentistry, medicine, and pharmacy, are now printed at the University Printing Office, as well as the quarterly bulletins of the new Los Angeles Department of the College of Medicine. The Academy of Pacific History added its series of publications beginning in 1909. The volume of material submitted for publication in the series previously established, and by the Lick Observatory, the Agricultural Experiment Station, and by the various departments and administrative offices of the University, all making regular requisition upon the University Printing Office, has also considerably increased. The effect of this growth in publication activities, with no corresponding development in the equipment of the printing office, has been such constant congestion as to impair seriously the value



of the University publications. Contributors are discouraged by unavoidable delays, and the purpose of our series, to afford ready opportunity for publishing results of investigation, is thwarted.

During the past two years, 130 papers have been published in the various series issued by the University, not including the *University of California Chronicle*, the bulletins, etc., of the Agricultural Experiment Station, the Administrative Bulletins, and the like. These papers totaled 3893 pages, with 192 plates, and represent an expenditure by the University of \$13,269.01 as the cost of printing. Of this amount, \$9,613.78 came from the general appropriations for publications and \$1,752.97 from other sources\* for 75 titles, amounting to 3361 pages and 181 plates in ten series of the University of California Publications; \$1,072.11 from the Lick Observatory budgets for 49 Lick Observatory bulletins; \$750.15 from the funds of the Academy of Pacific Coast History for the first five of its Publications; and \$80 from Library funds for a Library Bulletin.

Eight numbers of the *University of California Chronicle*, the University's quarterly, have been issued, 865 pages, at a cost of \$1,638.25. Since January, 1908, the *Chronicle* has been edited by Professor B. P. Kurtz, to the great advantage of this publication.

In addition to the publications actually issued, there were in the University Printing Office, on June 30, 1910, about fifteen pieces of work nearing completion, about 1400 pages in all, including two works of some four hundred pages each, and representing a cost of about \$4,100.

The expenses of the University Press, aside from the cost of printing, amounted to about \$2,650 for the two years, not including salaries. The largest item in this expense is the cost of distributing the publications issued.

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\* Department of Anthropology, \$534.89; Receipts from sales of *Tebtinis Papyri*, \$946.40; receipts from sales of *Notes on the Development of a Child*, \$215.74; cash from Miss M. W. Shinn, \$55.94.

A third volume of the series in Egyptian Archaeology, being Part 2 of Dr. G. A. Reisner's *Early Dynastic Cemeteries of Naga-ed-Dér*, was published in the fall of 1909 by the J. C. Hinrichs Verlag, in Leipzig, at the expense of Mrs. P. A. Hearst. Volume 8 of the Lick Observatory Publications, *Photographs of Nebulae and Star Clusters*, with 70 plates from photographs made with the Crossley Reflector at the Lick Observatory in 1898-1900 by the late Director J. E. Keeler, was issued from the State Printing Office in 1908. By an arrangement made with the Houghton Mifflin Company, two of the Weinstock Lectures, *Commercialism and Journalism*, by Mr. Hamilton Holt, and *The Conflict between Private Monopoly and Good Citizenship*, by Mr. John Graham Brooks, were published in the summer of 1909, with funds made available for that purpose from the proceeds of the Weinstock Foundation.

The distribution of the University's publications has steadily widened. There were 932 addresses on the exchange list on June 30, 1910, a net increase of 257 since 1908. Many of the new exchanges are due to the active interest of Professor C. A. Kofoed while in Europe in the summer of 1908. In addition to the new institutions added to the list of our exchanges, much success has been met in the effort to secure by exchange more complete sets of important publications needed by the Library. With the continued growth of the University's publications, greater assurance can be felt in requesting exchange privileges from the leading institutions and learned societies of the world. The geographical distribution of our publications sent in exchange is believed to be of interest, and is shown in the subjoined table.

As the circulation of the several series has an important bearing upon their usefulness, the following summary is given, showing the distribution of each series. Each department having a series is allowed 100 addresses for its own use, and 50 are allowed for reviews, bibliographies, etc. A few copies of each series are distributed to mem-

bers of the University in the several departments, to a few local libraries, and to some of our sister colleges and universities in the West. Two hundred copies are allotted to the author of each paper if needed for actual distribution. Few of the departments avail themselves of the full extent of the possible circulation of their series, but if the authors' use of their allotment be included the circulation of several of the series nevertheless compares not unfavorably with that of the other journals in their field. As the best interests of the publications seem to be met by distribution in the manner described, the subscription lists grow but slowly.

The sales of University publications for the past two years, so far as the receipts have passed through the office of the University Press, amounted to \$3,384.58, of which \$1,509.45 came from the sale of papers in the various research series, \$239.99 from the *University of California Chronicle*, and the remainder from the Calendar, Announcement of Courses, Catalogue of Officers and Students, syllabuses, etc.

Respectfully submitted,

ALBERT H. ALLEN,  
Manager of the University Press.

## DISTRIBUTION OF PUBLICATIONS.

Series	Exchange	Dept.	Reviews	Subser	Others	Total
American Archaeology and Ethnology	253	96	27	14	38	428
Botany	313	18	29	14	44	418
Classical Philology	110	41	34	9	40	234
Economics	119	73	38	2	40	272
Education	106	20	22	5	20	173
Egyptian Archaeology	33	....	....	1	9	43*
Engineering	76	....	14	....	29	119
Entomology	144	....	14	....	28	186†
Geology	345	26	22	73	26	492
Græco-Roman Archæology	39	....	....	1	10	50*
Library Bulletins	132	39	15	....	6	192
Lick Observatory Bulletins	{ Distributed mostly to the Observa- tory's mailing list of observatories and astronomical societies. }					407
Memoirs	80	11	16	4	34	145
Academy of Pacific Coast History	158	80	12	12	15	277
Modern Philology	92	34	38	4	52	220
Pathology	171	100	15	6	36	328
Philosophy	100	95	18	5	32	250
Physiology	253	100	16	16	39	424
Psychology	77	73	42	....	59	251
Semitic Philology	67	29	13	4	12	125
Zoology	368	61	30	11	58	528
University of California Chronicle	275	....	....	94	65	434

(The totals do not include the possible circulation of 200 copies by authors.)

Nothing has been published in the Education series since July, 1908; in the Engineering series since November, 1906; in the Entomology series since October, 1906; and in the Pathology series since February, 1907.

\* Not including copies distributed by the publishers.

† Not including copies distributed by the Agricultural Experiment Station.



# GEOGRAPHICAL DISTRIBUTION OF UNIVERSITY PRESS EXCHANGES.

June 30, 1910.

North America:			Portugal	8	
United States (and possessions)	275		Rumania	2	
Canada	22		Russia	33	
Mexico	6		Servia	2	
Cuba	2		Spain	9	
Barbadoes	1	306	Sweden	14	
			Switzerland	23	
			Turkey	1	506
Central America:			Asia:		
Costa Rica	1		Ceylon	3	
Guatemala	1		Malay States	1	
Honduras	2		Indo-China	1	
San Salvador	1	5	India	10	
South America:			Japan	9	
Argentina	10		East Indies	3	
Brazil	9		Singapore	1	
Chile	6		Syria	1	29
Colombia	1		Australasia:		
Paraguay	1		New South Wales	8	
Peru	5		New Zealand	4	
Venezuela	1	34	Queensland	6	
Europe:			South Australia	3	
Austria	31		Tasmania	2	
Belgium	32		Victoria	5	
Bulgaria	2		Western Australia	1	29
Denmark	17		Africa:		
France	77		Algeria	1	
Germany	90		Cape of Good Hope	7	
Great Britain	81		Egypt	5	
Greece	3		German East Africa	1	
Hungary	11		Madagascar	1	
Italy	42		Natal	1	
Luxembourg	1		Sudan	1	
Monaco	2		Transvaal	4	
Netherlands	13		Tunis	2	23
Norway	12				932

## MUSEUM OF VERTEBRATE ZOOLOGY

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BERKELEY, July 1, 1910.*To the President of the University,*

SIR: I have the honor to present the following report of the activities of the California Museum of Vertebrate Zoology, for the period from its inauguration, March 23, 1908, to July 1, 1910.

The formal founding of the Museum upon the former date was the culmination of the belief entertained by Miss Annie M. Alexander, of Oakland, that a repository should be provided for the proper preservation of specimens of the higher vertebrate animals of western North America. Miss Alexander had been for some time previously engaged in gathering material in this line, and her collection of 3,424 specimens became by donation to the University the nucleus of the new Museum. As has already been set forth in the President's last BIENNIAL REPORT, the establishment of the Museum upon a working basis was made possible through funds provided and guaranteed by Miss Alexander for its support for a period of years. There was also acquired by transfer from the Department of Zoology of the University some 1,300 specimens, many of which are of historic value as having been obtained by members of the State Geological Survey under J. D. Whitney.

Subsequent to March, 1908, the growth of our collections has been increasingly rapid, owing to the donation of specimens from many sources, to the activity of members of the regular Museum staff, and especially to the continued efforts of Miss Alexander who has in person conducted field explorations each year in different regions. At the present time there are in the Museum 24,704 catalogued specimens.

With the completion of our building (one-half the cost of which was borne by the Regents of the University and one-half by Miss Alexander) in February, 1909, all collections have been properly housed, and as a result of the work of the Museum staff, they have been arranged and card-indexed in the most approved manner.

The exhibition department of the Museum so far consists of three habitat groups of large mammals prepared with highest regard to the art of taxidermy and fidelity to nature. These groups are equal to the best modern work of the sort, and are intended to contribute chiefly to the interest and instruction of the general public. It is planned to add to this feature of the Museum as far as the limited space adapted to it will allow.

The greater part of the energy of those connected with the Museum of Vertebrate Zoology is expended in gathering and caring for the research collections. It is in the research department of the Museum that lies a great value, even though the sight-seeing visitor may know nothing of its existence. The maintenance of research collections on a large scale is unquestionably justifiable by the importance of the results to be obtained through them in both the purely scientific and economic fields. In an institution like the Museum of Vertebrate Zoology, which is part of a large university, the importance of research may even be emphasized over that of exhibition; for the presence of the research museum serves as a stimulus to the university student and as a source of material and information usable in the work of other departments in the University.

While it has not been found possible for members of the Museum staff to engage extensively and directly in teaching in the University, it has been possible for us to render aid in the way of material or information to the departments of Palaeontology, Zoology, Anthropology, and Botany. Courses of instruction in a knowledge of the mammals, birds, and reptiles of California, were, however, given in the short Summer Sessions of 1909 and 1910. These were

well attended and proved the demand for teaching in this line.

Our most obvious activity, though not necessarily the most important one, lies in the accumulation of the preservable remains of animals of the higher vertebrate classes. I am sure that no one will disagree with me in the claim that the results of our work will be of far greater moment in thus narrowing down the object of our work than if we were to spread it thinly over a greater range of subjects.

The field of our work is the region immediately about us. In other words, it is much less effective to attempt to secure a representation of the animals of the world than to exploit the fauna of a limited area. The Pacific Coast is practically inexhaustible, is naturally of easiest access, and should be of greatest interest to this institution.

Our collections consist of the skins and skulls of mammals, each individual collected being ordinarily represented by its skin, together with all dermal structures attached, and the entire skull, cleaned and preserved separately. The entire skeletons of a much smaller proportion of the specimens secured are also preserved; and of the smaller forms the entire animal, a few of each species, is preserved in alcohol or formalin for anatomical purposes.

In the class of birds the ordinary study skin is the chief portion preserved. The endeavor is made to secure complete skeletons representative of each genus at least; and also portions of skeletons of a greater number, consisting of skulls and sterna chiefly. As with the mammals, alcoholic preparations are saved, especially of young birds. The expense and mechanical inconvenience of collecting and storing alcoholics at present impose a practical limit upon the quantity of material to be cared for in this way.

Reptiles and batrachians are preserved entire as alcoholics. With the whole animal preserved in alcohol it is possible for the special student at any time to take out the skeleton of the reptile or batrachian that it is desired to study, and also to make any desired anatomical study.



The Museum's policy is liberal as regards the loaning of material to non-resident as well as near-by specialists. Material of any sort is loaned freely to any responsible person anywhere for the purpose of aiding in his investigations, or as basis of any special study. The value of a museum's hoard of specimens and facts increases in direct ratio to the extent to which they are used. Twenty-nine loans of specimens have been made to date, the most notable of which is that of a portion of our collection of bears to Dr. C. Hart Merriam, of Washington, D. C., who has in preparation a monograph of the bears of North America.

The museum curator only a few years since was satisfied to gather and arrange his research collections with very little reference to their source or to the conditions under which they were obtained. In fact it is surprising to find how little information is on record in regard to collections contained in certain Eastern institutions as accessioned previous to about 1890. The modern method, and the one adopted and being carried out more and more in detail by our California Museum, is to make the record of each individual specimen acquired, whether it comes in from an outside donor or whether, as is the most usual case, it is secured by the trained museum collector, as complete a history as practicable.

The field collector is supplied with a separate-leaf notebook. He writes his records on the day of observation. The floral surroundings are recorded, especially with respect to their bearing on the animal secured. The behavior of the animal is described and everything else which is thought by the collector to be of use in the study of the species is put on record at the time the observations are made in the field. The camera is as important a part of his outfit as the trap or gun. These field notes and photographs are filed in the Museum so as to be as readily accessible to the student as are the specimens themselves.

Furthermore, a rather elaborate system of card cataloguing is maintained in the Museum. Three sets of cards,

namely, accession, department and reference, which are kept up as a part of the regular work of the curators, enable the enquirer to determine quickly what material is on hand, in what form it is, when and where obtained, and, by following up the cross references to the field note-books, the conditions under which each animal was obtained.

As a matter of routine, each specimen as it is obtained in the field is at once tagged, the label being inscribed in India ink with the exact place of capture, date, collector, and field number. The original field number is the same as that under which the animal is at the same time recorded in the field notes. Its original tag is never detached from the specimen, no matter what disposition is made of the latter in arranging the collections in the Museum; and so, reversely, the student may quickly trace back again from any particular specimen its history, by referring to the card catalogue and field note-book.

Our efforts are thus not merely to accumulate as great a mass of animal remains as possible. On the contrary, we are expending even more time than would be required for the collection of the specimens alone, in rendering what we do obtain as permanently valuable as we know how, to the ecologist as well as to the systematist. It is quite likely that the facts of distribution, life history, and economic status may finally prove to be of more far-reaching value, than whatever information is obtainable exclusively from the specimens themselves.

I wish to emphasize what I believe will ultimately prove to be the greatest value of our Museum; namely, that the student of the distant future will have access to an original record of faunal conditions in California and the west wherever we now work. He will know the proportional constituency of our faunae by species, the relative numbers of each species and the extent of the ranges of species as they exist to-day.

Perhaps the most impressive fact brought home to the student of geographical distribution, as he carries on his

studies, is the profound change that is constantly going on in the faunal make-up of our country. Right now are probably beginning changes to be wrought in the next few years vastly more conspicuous than those that have occurred in ten times that length of time preceding. The effects of deforestation, of tree-planting on the prairies, of irrigation and cultivation of the deserts, all mean the rapid shifting of faunal boundaries, the extension of ranges of some animals, restriction in the ranges of others, and, with no doubt whatever, the complete extermination of many others, as in a few cases already on record.

If we now had the accurate record of the faunal conditions as they were in the Atlantic states a century ago, how much might we not be able to adduce from a study of the changes which have taken place! Now is the opportunity to make such records in our western region. Comparative studies of conditions in the same area at different successive times is bound to bring important generalizations in the field of evolution. It will be seen here how valuable also will prove the collections preserved at corresponding intervals. Changes in conditions will doubtless bring about changes in the habits and physical characters of the animals enduring them.

Another grave danger from the standpoint of the student of natural speciation lies in the introduction of exotic animals. This evil is growing rapidly in the effort to restock regions with more hardy or prolific game animals. If successful from the sportsman's basis, either of two things will happen: the original, native species will become extinct by competitive replacement, or, where the relationships are close, crossing will take place, so that the original species will be spoiled through hybridization. There are already instances of both in different sections of the United States. It is highly desirable that a good representation of specimens of the pure, native stock be properly preserved in our Museum for future comparison.

Exploratory work conducted along the above lines has

been prosecuted during the preceding two years in the Sitkan and Prince William Sound districts of Alaska, in the Pine Forest Mountain region of northern Nevada, in the San Jacinto, Salton Sea and San Diegan regions of southern California, and along the lower Colorado River in southeastern California and western Arizona. Field work is now under way in Vancouver Island (carried on personally by Miss Alexander) and in the Modoc region of northeastern California.

The mass of information already at hand brings us face to face with numerous problems of distribution and variation. As our field work is carried on, we learn more and more in detail of the extent of the range of each species of animal, and we are able to recognize more clearly the correlated factors. We are able with more accuracy to define the characters of the local races or subspecies. The study of these "small species" I believe is leading to a better understanding of the relationships of animals and the causes of evolution than if we ignored the slight varieties and contented ourselves with dealing systematically only with the species differentiated so far as to be distinguishable at a glance.

Systematists, either as members of our Museum staff or students from elsewhere, who make use of our material, are putting on published record the more important facts of distribution and variation as they come to light. Volume 5, of the University Publications in Zoology, 1908-1910, 440 pages and 34 plates, consists entirely of contributions from the Museum of Vertebrate Zoology. There have been, besides, several papers published elsewhere. All of this activity leads to the more thorough knowledge of animals necessary for any sort of wider generalization.

The economic value of birds and mammals to the agricultural interests of the State is one of practical importance. In our field work we obtain a great amount of information applicable along this line; and, further, our staff keeps posted as to the results of the important work carried on



by our national government to ascertain the beneficial or injurious effects of wild animals. Either from knowledge acquired directly by ourselves, or from that published elsewhere, we are often able to give the information asked for. The Museum is thus constituted a bureau of information as regards the higher vertebrate animals of the region with which we are familiar. We have already been able to render coöperative service in this line to the California State Game and Fish Commission, to the United States Department of Agriculture, and to the United States Public Health and Marine Hospital Service.

The functions of the California Museum of Vertebrate Zoology may be summarized as follows: Collecting and preserving animals of certain groups from a limited region; recording in permanent form all obtainable information in regard to their distribution, variation, economic status and habits; serving as a bureau of popular information as regards the animals of the region worked in; the description and analysis of ecologic and faunal conditions as they are to-day; the publication of the immediately important data obtained, calling attention to whatever generalizations may be indicated by these facts; participation in the teaching of vertebrate zoology in the University; the preparation of exhibition groups to lead the public to recognize the meaning and value of animal life.

In closing this report, it is only fair for me to state that the methods and policies outlined above are the outcome of the original foresight and continued wise counsel of the founder and patron of the Museum. It is the intention of those who have the future of the Museum at heart, to continue to develop its usefulness along these lines, so that in time it will have earned certain recognition as one of the invaluable possessions of the University and of the State.

Respectfully submitted,

J. GRINNELL,  
Director.

## THE INFIRMARY AND THE DEPARTMENT OF HYGIENE

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: I have the honour of presenting to you the following report concerning the Infirmary and the Department of Hygiene for the academic years, 1908-10.

As in previous years the State Hygienic Laboratory has done a distinct service to California in helping physicians to recognize contagious diseases and in furnishing local health officers valuable laboratory assistance. One phase of the work is the search for diphtheria bacilli in cultures taken from the throats of persons suspected of having the disease or of harboring and distributing the germs. Another important work is the microscopic examination of sputa for tubercle bacilli. By making an exact bacteriological diagnosis the laboratory takes an important part in the campaign against that widespread disease, tuberculosis. The search of blood for the organisms of malaria, the testing of blood-samples for the reactions characteristic of typhoid fever, and various other examinations which come within the purposes of the laboratory are undertaken at the request of physicians. An assistant has been added to the staff and has been assigned to field work. His duties consist in the visiting of districts where inspection by an expert enables the State Board of Health to cope more successfully with local problems. Much of his time is spent in visiting public water-supplies, inspecting them, and properly collecting water-samples for examination in the laboratory.

Of special interest is the service rendered in connection with the epidemic of rabies. Up to last fall no authentic case had even been reported from the Pacific Slope, but the disease recently entered the state through its southern borders. During the past winter and spring the heads of suspected animals have been sent to the laboratory by local health authorities. Examination of the brains has enabled the laboratory to give a positive diagnosis of rabies in the cases of sixteen dogs, one cow, and one cat. Negative results were reported in nearly equal number. The great importance of a rapid and reliable diagnosis rests on the fact that many of the suspected dogs have bitten human beings. An early positive diagnosis gives the victim of a rabid dog sufficient warning to take treatment which will render him immune before the incubation stage of hydrophobia is over.

The instruction in bacteriology has been made more comprehensive by the addition of separate courses in the bacteriology of infectious diseases, and in the bacteriology of the soil. The increasing demand for instruction in the bacteriology of domestic science has been met in the elementary course. The teaching of bacteriology has been introduced into the summer session in courses adapted to the needs of physicians and medical students as well as of those who have had no previous training in this field. A course in School Hygiene has opened a field of study which is important to future teachers and to others who expect to deal with the health problems of institutions.

More is being done for the students than ever before in the prevention of disease and in the care of the sick. Before the new student has completed his registration he has been examined physically and has been advised concerning any weaknesses which need attention. A warning at the time of entrance often prevents a student from undertaking more work than he can carry without injury. A new feature of the physical examination is the systematic eye-examination by a specialist. During his first year as an undergraduate the student receives in the required course

in Hygiene much straightforward advice in the methods of avoiding disease and of increasing his efficiency.

When a student becomes ill, he finds the Dispensary of the University Infirmary open to him, and, if his disease is sufficiently serious, he may remain as a bed-patient under the care of the Infirmary Staff. A new building has been added to the Infirmary and the first floor of the addition has been given up to the Dispensary, but in spite of this new space there is considerable crowding. The extent and growth of the dispensary work is well shown by a comparison of the statistics of the year just ended, when 2,272 students received 18,625 treatments, with those of two years ago, when 1,299 students received 9,546 treatments. These figures show an increase in two years of 75 per cent. in the number of students cared for and 95 per cent. in the number of treatments. During the same two years the number of bed-patients in the Infirmary rose from 312 to 456, an increase of 46 per cent. In the same period an increase of 13 per cent., from 2,684 to 3,025, occurred in the number of students who were entitled to the privileges of the Infirmary.

Through the generosity of Mr. F. W. Dohrmann and Mr. Julius Kahn the Infirmary has been equipped with everything necessary for the proper examination of the eye, and it has now, in the year 1909-10, become a part of the regular physical examination given to all matriculants at the University.

Owing to delay in forwarding the instruments eye-examinations were not begun until the early part of October and have continued since. It has been impossible to examine all the matriculants because of conflicts with their regular class-work. Thus far 850 students, men and women, have been examined, and the results are tabulated below.



	Men	Women	Total
Normal .....	125	64	189
Hyperopia .....	172	73	245
Simple hyperopic astigmatism .....	165	95	260
Compound hyperopic astigmatism .....	11	11	22
Myopia .....	39	21	60
Simple myopic astigmatism .....	36	17	53
Compound myopic astigmatism.....	16	5	21
	<hr/> 564	<hr/> 286	<hr/> 850

From the above table it will be seen that only 22 per cent. of the students examined were normal. Under this heading are included all cases that would not accept a correcting lens. As the test was only qualitative it is probable that at least 5 per cent. of those so-called normal cases would be found hyperopic under a cycloplegic.

Taking the hyperopic affections together, *i.e.*, hyperopia, and the two forms of astigmatism, they form 62 per cent. These cases are mostly of a low grade, but in many instances there is enough error to warrant the assertion that sooner or later they will develop symptoms of eye-strain. It is of decided advantage to the student to be forewarned as to such possibilities, and many have taken advantage of it to have their errors corrected at the beginning of their university career.

Myopia and the two forms of myopic astigmatism were present in about 16 per cent. of those examined. Of these cases, 16 were recorded as having only one-quarter of a diopter—an amount so slight that the error is very doubtful. Deducting the doubtful cases and the seventeen cases of foreign birth, there were 11.9 per cent. of myopics among American-born students. Compared with statistics from other parts of the country and from Europe, this is a very favorable showing: Erismann gives 42 per cent., and Conrad 62 per cent. for Germany; Priestly Smith 20 per cent. for England; Derby and Loring 27 per cent. for the United States. As the students of the University of California are recruited largely from the public schools

of this state, this low percentage of myopia confirms the writer in his opinion that the free out-of-door life of the children, made possible by the climate of California, tends to keep down the percentage of near-sighted students. This climatic advantage, coupled with an increased perfection in school hygiene, ought to lower it still more.

There were twelve cases of color blindness, which it is hoped will offer an opportunity for the study of this defect along the line of Mendelian inheritance.

Dr. Wilbur A. Sawyer prepared much of the material contained in this report during my half-year absence from the University. The portion on eye-examinations was prepared by Dr. Theodore C. Burnett, who has given his time without remuneration for this exceedingly important work.

Respectfully submitted,

G. F. REINHARDT,

Professor of Hygiene and University Physician.

## DEAN OF THE LOWER DIVISION

(ADVISOR)

BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: A year ago, after two years' experience in the Advisor's office, I made the suggestion that the supervision of the work of the first year students could be much more efficiently carried out if the members of the Board of Advisors were formally appointed by the university administration and were granted a slight addition to their regular salaries. Up to that time the board had numbered forty men chosen by myself, and working voluntarily, on my personal request. My feeling was that the dignity of membership in the board would be raised by an administrative appointment and that more definite and more regular services could be insisted on if the advisors were assured of reimbursement for the sundry incidental expenses involved.

The placing of the work, thus, on a more business-like basis would, I believed, sufficiently increase the efficiency of the system, to make it possible to cut down the numbers of advisors from forty to twenty-five.

You consented to this arrangement, and I beg now to submit the following report on the workings of the plan in this new form.

In selecting the twenty-five advisors the foremost consideration was the personal interest of the men in boys as boys rather than as students. They must possess a real desire to get into human relations with the groups entrusted to them and must have tact and adaptability in dealing with personal as contrasted with academic problems.

In addition, they must also be men who grasped the general problems of the University and who knew something or would take pains to learn something of the rules and regulations and general machinery of administration of the University.

The advisors having been appointed, a list of them was sent to the two hundred and fifty or more of the secondary schools in the State with a request to each principal to talk with the boys of his school who were proposing to enter the University, explaining the plan to them, and assisting them to select an advisor if they so wished. The principal was asked to report the various selections to me, and to give each boy a letter of introduction to the advisor chosen. In addition the principals were supplied with blanks on which to forward confidential memoranda as to the boys' general character, interest, personal tastes, etc.

Principals were likewise provided with lists of courses open to freshmen, in order that they might give counsel as to choice of college, subjects, etc.

In August, at the opening of the University, a considerable proportion of the new students had thus already chosen their advisors. The others were assigned to the various members of the board more or less arbitrarily. But, so far as possible, by using data as to the student's choice of college, the studies he was likely to take, etc., the assignments were based on a consideration of the probable common interest of the student and advisor in particular lines of work. For instance, students in the Engineering Colleges were assigned to men whose work was in the technical courses or in natural sciences.

On registration day, then, all new students, except those whose admission had, for some reason, been delayed, had already been assigned to some member of the board, and the machinery of registration was so arranged that the first step that the freshman must take after getting his admission card at the Recorder's office, was to see his advisor. Thus



an immediate personal contact was assured and did, as a matter of fact, take place, in practically all cases.

In the colleges of general culture—Letters, Social Sciences and Natural Sciences—the next step consisted of consultations between student and advisor as to choice of studies, etc., the advisor having oversight of the study cards and his signature being necessary to validate it. In the technical colleges objection was made that the advisors could not have the necessary knowledge of the professional requirements to exercise properly such an oversight, and students in these colleges, therefore, had to be sent by the advisors to the deans of these respective colleges for approval of their study lists.

These preliminary steps having been taken and the students being launched in their university work, the advisors were next expected, and at the earliest possible moment, to enter into social relations with their groups of students, by visits to their homes, by simple forms of entertainments, and any other means which might suggest themselves. This was very generally done, and the students for the most part, were found ready to meet the advisors half way.

With so large a group of advisors the methods employed in cultivating this personal relationship have naturally been highly varied. Invitations to dinner at the home of the advisor, informal social gatherings, with simple forms of entertainment, sometimes with the whole group of advisees, sometimes by twos or threes, conversational or musical evenings, story-tellings, readings, discussions of university problems and experiences, and a variety of other methods, have been employed. Reports from the advisors show that fully 60 per cent. of the freshmen have thus been reached in more than a perfunctory fashion. A considerable percentage of the students have, however, as yet, failed to respond to these advances, and no attempt has been made to force attentions where there has been the least sign of unwillingness.

One particularly useful method of giving a personal touch to the relationship has been through the reporting to each advisor of all cases of illness among his group of students. Daily reports are sent from the Infirmary to the Advisor and are forwarded by him at once to the advisor concerned, who then visits the patient at the Infirmary.

The advisors have also been kept informed as to any delinquencies in scholarship or attendance on the part of any of their advisees as far as these delinquencies have been reported to the Recorder by instructors. Much good, it is believed, has been accomplished by this sort of oversight. It has been found that many of the delinquents readily respond to a little personal prodding in those cases where the delinquencies are due to lack of application. In a far larger number of cases, however, the deficiencies have been found to be due to the student's attempting too much work, or courses for which he has not had adequate preparation. In these cases students have been persuaded to drop a portion of their work before becoming hopelessly involved. The result seems to have been a better general average of work in the courses that remained, and it is not unlikely that the smaller percentage of failures which was noticeable last December, was due to this cause.

The year's experience seems to show that the system is really working. It is found that the students, although they sometimes do not seem very responsive when everything is running smoothly, yet, having made the personal acquaintance of an advisor, naturally turn to him when they get into any sort of difficulty. The reports of the advisors show that the aggregate numbers of meetings between students and advisors runs up to several thousand for the first term of the academic year just closing.

The organization of the Board of Advisors is very simple. A small group of six or seven of the men most interested have met rather frequently for discussion and consultation. This group has decided on subjects to be brought before the whole body. The latter have met

together about once a month. These meetings have favoured a certain uniformity of policy and action, although as to details, each advisor has been left as free as possible to use his own methods.

An effort has been made, originating in the suggestion of one of the members of the board, who is a fraternity man, and concurred in by the other fraternity members of the board, to stimulate an interest in better scholarship among the fraternities. Records have been compiled for all student members of each fraternity and each house club, and for corresponding groups of non-fraternity students, chosen at random from among the entire student body. These records show a low grade of scholarship among the fraternities. The house clubs stand highest in this respect, their members showing a general average of 52 per cent. of first and second grades. The non-fraternity students come next with 51 per cent., while the general average for fraternities is only 39 per cent. The figures for the separate fraternities and clubs are being as yet treated as confidential. They are turned over to interested members of the fraternities themselves for their consideration and such action as they may find possible. The response which the fraternity men are making promises well for their determination to raise their standards at least to the level of the average non-fraternity man.

Among the topics which the Board of Advisors has discussed is the possibility of the University's aiding in raising the standards of living accommodations among the students. Calls made by advisors on students in their homes have afforded some information as to these conditions, and data recently collected by them in more formal fashion, from the five hundred freshmen, have thrown more light on the matter. The board is of the unanimous opinion that steps should be taken to provide for a closer oversight of these conditions by the University. At their last meeting they heartily endorsed the suggestion of the Committee on

Outside Relations that an "approved list" of boarding places should be published and that in order to insure the approving being properly done, there should be appointed regularly authorized inspectors.

The experience of the past year has convinced me that we are working on the right line. The system is as yet incomplete. It takes at least a full college generation of four years to get the students fully accustomed to new methods. Yet the general feeling among the advisors is that the students show an increasing desire to meet them half way. This is emphasized by the fact that a considerable number of upper class students continue their personal relations with their advisors although there is no formal attempt to maintain the system beyond the first year.

Two or three things in particular have become increasingly apparent concerning the future development of the system. The first of these is that the crux of the problem lies in the proper oversight of the freshmen. Nearly 50 per cent. of the students who get into serious difficulties of one sort or another, are freshmen. The whole problem is chiefly concerned with providing a gradual transition from the paternalism of the high school to the freedom of the University, and guarding against the bewilderment and confusion of a too sudden plunge into the sundry distractions of college life. If this transition can be properly safeguarded during the student's first year here, the remaining years may be left to take care of themselves.

The second point is that the Board of Freshmen Advisors can do but part of the work. At best they can but point the way. To get the best results, the time must some day come when not merely a small group of instructors will be cultivating friendly, personal, human relations with their students, but when it will be the general rule for all Lower Division instructors—when one of the qualifications for the work of instruction will be the desire and ability to be "teachers" in this more intimate sense.



And a third point, probably the most important of all, is that the students of the University themselves must play a large part in lightening the freshman's difficulties. With the peculiar capacity which the students of the University of California have shown for self-government, this seems the normal line of development, and I am convinced that the time is now ripe for taking this next step. We have already in existence a large part of the machinery necessary, in the increasing number of fraternities and students' clubs. Although as yet, but forty per cent. of the male students belong to such groups, yet their organization enables them to exercise a far more than proportionate influence in the student body. The manner in which they have responded to the statement of facts contained in the reports on scholarship above alluded to indicates that their leaders have a full sense of their responsibility. Every indication points to their willingness to coöperate with the faculties in dealing with the freshman problem.

For the purpose of securing this coöperation, and at the suggestion of some of the leading spirits among the upper class members of fraternities and clubs, I have asked each of such organizations to appoint a senior member to join in a general conference to discuss methods by which they can assist in working out the salvation of the first year students. I am confident that the response will be genuine and that important results will follow.

There will still remain abundant work for the Board of Freshman Advisors; for, as already stated, only forty per cent. of the students belong to fraternities or clubs, and the work of these organizations will be chiefly among their own members. Besides, the freshmen do not, ordinarily, join fraternities or clubs until sometime after their admission to the University, and the earliest days of the year are the most important of all. The Board of Advisors should, therefore, be continued, and should be increased by about three members.

No advisor should have more than twenty students in his group and if the rate of increase in size of the freshman class is maintained next August, the number of advisors should be increased from twenty-five, as at present, to twenty-eight.

Very respectfully,

LINCOLN HUTCHINSON,  
Advisor and Dean of the Lower Division.

## DEAN OF WOMEN

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: The two years covered by this report have, with the exception of the College Hall experiment, contained little of unusual interest or importance. The work of the office in printing lists of approved boarding-houses, in finding work for students in need of financial help, and in advising freshmen about their study lists, has gone on as usual. In 1908 I, personally, examined and approved all the study lists of the four hundred freshmen women. In 1909 a new system was inaugurated. Mrs. Harry Beale Torrey, who was appointed Dean of Women during my year's leave of absence, had two "advisors for freshmen" to assist her in this work. These advisors, Miss Elise Hewitt and Miss Jane Hawk, with the help of the students of the Senior Advisory Committee and of certain faculty women, tried to be of practical service to the freshmen throughout the year.

In the course of the two years several new house-clubs for women have been founded through the House-club Committee: in 1908, the Cranford, through money provided by the Federation of Women's Clubs; in 1909, the Bide-a-Wee, by money given by the Association of Collegiate Alumnae and originally intended for Freshman Hall, the Carnarvon, financed with money collected directly from the Federation of Women's Clubs, and the Palmer, with money accumulated from annual payments of clubs already existing. The Cnoc Tara Club has paid in \$500 this year, removing in full its indebtedness to the Club House Loan Fund Committee. In the last year three clubs have changed to frater-

nities: La Solana received a charter from Alpha Chi Omega, Dal Riada from Alpha Xi Delta, and Cnoc Tara from Sigma Kappa. Last winter there were approximately three hundred women housed in the eleven fraternities and six clubs.

In the fall of 1909, a first experiment in dormitory life was made. College Hall, financed by private means and under private management, was, nevertheless, under the supervision of this office. During the first term, Mrs. Torrey lived in the west wing and Miss Hewitt in the east wing. The rooms, which accommodated eighty in the two wings, were assigned from the Dean's office, and the University undertook to be responsible for the social conditions within the dormitory. A Self-government League was immediately formed by the students. This league made whatever rules there were at College Hall. Its management, during the fall term, August to December, 1909, was efficient and conscientious. But the system of divided responsibility, borne jointly by the University and the owner of the dormitory, did not meet with success. At the end of the first term the University disclaimed its share of responsibility, leaving College Hall an entirely independent private enterprise. It is too soon to tell what the final adjustment will be. (It may be that it will be found impossible for the University to share responsibility in any such enterprise. Or it may be that the solution of the problem will come through a trained buyer appointed by the University and with whom the student managers of the clubs and fraternities can coöperate.) I believe more thoroughly than ever in the dormitory system for this University, and the work of the Self-government League, I think entirely justifies this belief. A successful dormitory, whether of university or private ownership, is, perhaps, as great a contribution to the University as could be made through this office. To attain this end, I shall spare neither time nor strength this following winter. In this, as in all undertakings, I count with surety upon the support of the students. For these last two years have been years of quiet



progress among the women students, years marked by a gradual but steady growth in the sense of responsibility and in the desire to coöperate with this office. The regulations of Pan Hellenic (though they have not always proved successful), the work of the Senior Advisory Committee and the Prytanean Society, the discussions in the mass meetings and, above all, the efforts of the Self-government League in College Hall, are all indications of the growing ability on the part of the women to govern themselves and to govern themselves wisely.

Respectfully submitted,

LUCY SPRAGUE,  
Dean of Women.

## THE DEAN OF THE SUMMER SESSION

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: The enrollment at the Summer Session of 1910 reached the total of 1052, not including those in attendance at the Summer School of Surveying. This is the largest enrollment that we have ever had. In quality, too, our Summer Session has now the reputation of being one of the best in the land; and it has reached its present rank among summer schools without the expenditure of a dollar for paid advertising. Many other universities spend large sums in giving publicity to their summer sessions in the advertising columns of the educational journals; but we have constantly relied for our patronage upon the policy that a pleased customer is the best advertisement any business can have. How to make our work more widely known without appearing to be urging people to come to Berkeley is the most important problem with which we are at present confronted. The complaint is still frequently made by students that even the existence of our Summer Session is not sufficiently well known in the neighboring states. Last year three students from the State of Washington are reported to have gone to Stanford, not knowing that there was a summer school at Berkeley. When we take into consideration the very marked advantages which we have in the way of cool summer climate, and our commodious and attractive buildings there is no reason why, if we provide the right kind of courses and give proper publicity to them in the neighboring states, we should not materially increase the usefulness of our Summer Session in the near future.

A most important step in the history of the Summer Session was taken last year when the Academic Council voted to give full recognition to the work of the Summer term in fulfillment of the residence requirement for all of our degrees. Thus far the effect of the measure has been to increase conspicuously the demand for Upper Division and Graduate courses.

Teachers still continue to be the largest class of our Summer Session students. In 1910 there were nearly six hundred teachers in attendance, distributed as follows: 16 college teachers, 10 normal teachers, 245 high school teachers, and 320 teachers in elementary schools.

Two kind of courses are in conspicuous demand by teachers, first elementary work such as beginners courses in modern languages, and secondly, at the other extreme, courses of a distinctly graduate character. All of our elementary work of the type of free elective courses of the regular session is easily financed by our fee of fifteen dollars; but in the past four years we have found it impossible in most departments to provide *bona fide* graduate work on a self-supporting basis. Ample provision should be made for supplying the increasing demand for graduate work. It was once doubted whether such work was feasible in the short term of six weeks; but for several years past very satisfactory graduate work has been accomplished in a number of departments where the highest standards of scholarship are maintained.

All of my predecessors in the office of Dean of the Summer Session have deplored the fact that students who have been conditioned during the regular session make use of our vacation courses for the removal of their conditions. My own experience in this matter during the past four years leads me strongly to the conclusion that it is not true, as a general proposition, that undergraduates who are making up past failures are not desirable students. Some of our best records have been made by students who have received conditions during the regular session, having more

or less unconsciously neglected their studies because of social and other distractions. Such students are continually coming to me at the close of a summer session to testify that they have been able for the first time to do serious uninterrupted work. The undesirable students, in the so-called derelict class, are such a minority (about two per cent. of the entire enrollment) that we should not refuse to put upon our programme courses parallel and equivalent to those in the regular session as the only means of maintaining high standards during the Summer Session. The real solution lies in providing courses that are entirely equivalent to those of the regular session in both the ground covered and the thoroughness of the work.

On the other hand, the logic of our situation concerning conditioned students, all tends toward the general proposition that students who have had one educational opportunity, at the expense of the State, should be required to pay for all subsequent opportunities to make up their failures. However, even if students who are making up conditions are really undesirable, there is no cause for alarm in our present situation, for although the total number of students at our Summer Session has doubled in the past four years, the number in the class in question has remained about the same. And furthermore we need have no fear that students will neglect their work during the term time because of the opportunity to remove conditions that the Summer Session affords. The financial expense together with the loss of a summer vacation is too great a sacrifice.

From the beginning of our Summer School we have each year offered courses for which entrance credit may be secured. This is a policy to which some have raised serious objections. The primary object of these courses is to furnish observation classes where high school teachers may learn the kind of work which the University approves, both in the subject matter and the methods of teaching. We have carefully watched these courses with the purpose of safeguarding our standards, and see no reason for discon-



tinuing them. The number enrolled in these matriculation courses has in fact decreased during the last four years during which period the total attendance has doubled.

It is a significant fact that the better eastern summer sessions have a more cosmopolitan attendance than comes to the University of California. Some of them draw as high as forty per cent. of their students from beyond their own State, while only about ten per cent. of those in attendance at the Session of 1910 were from outside of California. This is further evidence that our Summer School is not as well known as it should be beyond our own State.

Respectfully submitted,

C. H. RIEBER,

Dean of the Summer Session.

UNIVERSITY EXTENSION

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: During the last two years the work of the University Extension Department has exhibited a tendency to remain stationary or even to suffer a diminution in the number of centres and lectures given. The general policy of the department in regard to the organization of centres and the conduct of lecture courses in the various towns and cities of the State has not been altered in any important respects since the main lines of the department's work were laid down by Professor H. Morse Stephens in the year 1902-03. The details for the establishment of centres and the selection of lecturers and courses are still left in the main to local committees and local initiative, though the director in Berkeley holds himself in constant readiness to offer any suggestions that may seem appropriate after the local organization is once formed, and to take the first steps in interesting communities in the work whenever there is any promise of success. The nature of the courses offered, the use of travelling libraries, the printed syllabuses, and the general methods of instruction are the same as were employed in previous years, except for slight modifications hereinafter stated.

The number of centres which can be maintained depends not only upon the demand for lectures on university subjects in the State but upon geographical location and the number of men available to the department at the University for this rather specialized kind of work. Localities may either be so far away or have such poor railroad connections that it is impossible to send lecturers regularly to

them. Sometimes the remuneration is not sufficient to attract the right man to accept a lectureship when he is asked for by the centre. These difficulties have combined to restrict the usefulness of the work of this department within constantly narrowing limits. In the year 1904-05 there were sixteen lecture courses actually given, while two centres were temporarily suspended. A large number of these centres were in Southern California and there were several in the San Joaquin and Sacramento valleys, the northernmost being Red Bluff. In 1908-09, the last year of Professor Stephens' administration of the department, there were but seven centres, and only one, San Diego, in Southern California. In 1909-10 there were but four centres, Bakersfield, Sacramento, Sonora, and Watsonville. During the present year there promises to be six or seven centres with San Diego again the only one south of Tehachapi. In fact, except for an occasional inquiry from individuals and the centre at San Diego, there seems to be no interest in University Extension in the southern part of the State.

One of the limitations on extension work in the past has been the lack of a sufficient variety of subjects that could be handled by the lecture method. History has been practically the only subject offered, although it was not purely political history, for several courses have been given on American financial history, the history of Italian Art, the history of Music, and the history of Literature. This objection to the extremely limited field in which University Extension work was given was in part removed last year by the addition of Professor T. H. Reed to our staff, his lectures dealing with contemporary social and political problems in the United States. These lectures have had the special merit of appealing to business and professional men and not merely to school teachers and members of women's clubs. Another step away from a too exclusive restriction of extension work to history and the humanities, was taken at the beginning of this present year when Professor R. S.

Holway of the Department of Geography was added to the staff. His lectures on the physiography of California and general geographical conditions in the West, with special emphasis on the present day problems of deforestation and conservation, bid fair to open up larger possibilities for extension work. To meet a strong demand in some centres for a discussion of current events and international problems, a course has been projected designed to cover the most important recent developments in the leading countries of Europe and Asia.

It has been found from experience that very few people have cared to avail themselves of the opportunity to obtain university credit in connection with our courses. Our lecturers, however, are always prepared to conduct classes for more intensive study in the various centres, so that those who wish to take examinations and secure the two units, may do so. There have been repeated requests from various parts of the State for correspondence work such as is given by the Extension Department of the University of Wisconsin, but it has not seemed advisable as yet to attempt it.

Two developments in the conduct of extension work, which conditions in California have imposed upon the department, have come about in the last two years. Owing to the impossibility of securing sufficient remuneration for staff lecturers (those who devote themselves entirely to organizing centres and lecturing) it has been found necessary to dispense with them altogether and to employ only instructors and professors of the University. Also, because of the difficulty in some centres of raising the necessary \$300 for a full course of twelve lectures, and partly also because of the difficulty of enlisting as great an interest in one subject as in two different ones, it is becoming more and more common to offer half courses in those centres which cannot afford the full twelve lectures, and two half courses in place of a full course. It is to be hoped that it will become the increasing practice of the cities and larger towns to appropriate a part or the whole of the expenses for a



centre, as in the case of Sacramento, where the School Board votes \$150 for a half course. This obviates the difficulty of raising money by subscription, which is seldom easy and is always more or less arduous and disagreeable.

In short, the financial problem is as usual the one which presents the most difficulties. It is becoming harder each year to found enough centres, with the cost per lecture \$25, to employ men of the requisite ability for platform work, to say nothing of increasing or even maintaining an adequate material equipment in travelling libraries, stereopticons and lantern slides, and the printed syllabuses. In default of a special subsidy from the University or special appropriations from the city school boards there is much reason to believe that the expected growth in the usefulness of this department will not be realized.

Respectfully submitted,

DONALD E. SMITH,  
Acting Director of University Extension.

## THE EXAMINER OF SCHOOLS

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: I have the honour to submit herewith my report as Examiner of Schools.

In my previous report, I set forth the changed method used in the accrediting of schools: their accrediting as wholes, and not by subjects; the discontinuance of examination by department specialists; and the development of a statistical treatment of the schools, through the records made by their representatives among the freshmen in the University.

In the two years just passed, all these features of the method of accrediting have been continued. There has been no examination by specialists; no accrediting of subjects; and the statistical method of attacking the problem has been continued.

The results thus gained have proved to be of great use both to the University and to the schools: to the University in administering the accrediting system; to the schools by helping them to keep in closer touch with the University and its standards of work, and by giving them a surer criterion in issuing their recommendations. The method of judging a school largely by its output—though in practice it is subject to various limitations—appeals to most school men as sound in principle and less liable to lead to arbitrary action than any other system yet devised.

It does not appear that the system, as interpreted and administered has worked or is likely to work, hardship on

any school; while under its administration the standards of the schools (so far, at least, as preparation for college is concerned) have been very materially improved. Moreover, there is reason to believe that under the stimulus of the light thus thrown upon the work of the schools and of their graduates, the quality of work done by the freshman classes is gradually improving. Details and further discussion are to follow.

The Examiner has personally examined in the past two years about 180 schools, an average of 90 per year. The time devoted to such examination has been the first half of each calendar year, approximately January 15 to June 15. The total number of weeks actually spent in the work has been, 19 in 1909, and 20 in 1910. These were, in nearly all cases, weeks of six or seven days, as the distances to be covered frequently necessitated Saturday and Sunday travel, in order to leave five days per week for examining schools. The time actually spent in the schools has been at least one full day for each school and two or more for the larger schools.

The total distance traveled was approximately 20,000 miles. This makes an average of about 110 miles for each school visited. Traveling and incidental expenses of the Examiner have been about \$990 for the two years. This is approximately \$25 per week of travel, and an average of \$5.50 for each school visited. Twenty-six private schools were examined, which pay to the University a fee of \$5 each for the examination. Deducting this amount, we have an average cost to the University of \$4.75 for each school examined.

The statistical study of the schools, according to the method explained in my previous report, has been brought down to include 1908 and 1909, and consequently now covers nine consecutive years.

This statistical study is an effort to ascertain the efficiency of the accredited schools through an examination of the scholarship records of their graduates who have been

matriculated in the University on school credentials, without examination. The scholarship records used in this study are exclusively those for the first half of the freshman year, since during that period the student is most nearly a product of his preparatory school. In the University records, grade one signifies marked excellence in a given course or subject; two, thoroughly satisfactory work; three, passable work; four, conditioned work, the deficiency being such as is removable by re-examination; five, failure, necessitating a complete repetition of the course.

Let us now suppose that a given secondary school, the X High School, contributes to the freshman class in a given year two or more of its graduates, and that during the first half of the freshman year these students undertake, say, 53 units of university work, distributed among the five grades of scholarship as follows:

School X	Grades of Scholarship				
	I	II	III	IV	V
	5	21	20	5	2 = 53

We desire to know the general average for the high school, that is, the efficiency of the school in terms of scholarship grades in the University. To find this general average, multiply the number of units of work in each grade of scholarship, as above, by the numeral representing that grade; add the products so obtained; divide this total by 53, the number of units of work taken, to obtain the average grade per unit of work. Thus:

Units of Work	Grade or Value of Work	
5	multiplied by 1	equals 5
21	multiplied by 2	equals 42
20	multiplied by 3	equals 60
5	multiplied by 4	equals 20
2	multiplied by 5	equals 10
—		—
53		137

$137 \div 53$  (total units) = 2.58 (average value).



The figure thus obtained (2.58) may be termed the *index figure* for the school in question, and hereafter in this report this expression will be used.

TABLE I.

*General view of nine Freshman Classes.<sup>1</sup>*

Year		1901	1902	1903	1904	1905	1906	1907	1908	1909
Index Figure		2.56	2.58	2.57	2.49	2.48	2.51	2.50	2.49	2.41
No. of Freshmen Considered		383	458	401	455	391	431	428	472	546

Two new facts are here especially noticeable: first, the steady rise in the number of students from the California schools during the past four years; second, the very marked improvement in the index figure for the year 1909. It may be noted that for the years 1901-2-3 the index figure remained about constant, around 2.57; for the next five years, 1904-1908, it remained steadily about the noticeably better average of 2.50; while for the year just closed, 1909, the index figure is 2.41—nine points better than the average for the five preceding years, and sixteen points better than the average for the still earlier three-year period, 1901-03.

Now, the index figure of each year is the sole official indication we have of the faculty's judgment of the quality of the various classes. By this criterion, the class that entered in August, 1909, is decidedly the best class that has entered the University in all the nine years covered by our present investigation. If this be true, the University may congratulate itself on the growing efficiency of the high schools and the constant good judgment of the high-school principals. It would seem to be a vindica-

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<sup>1</sup> Graduates of California public high schools only, who entered the University in August of each year. The numbers here given for each year do not represent the total number entering the freshman class; it represents only those students from the California accredited public high schools who, entering in a given year in regular *freshman* standing, stayed long enough to get a university record for work done. Students leaving with work incomplete, if honourable dismissal or leave of absence was granted, are not considered.

tion of the present method of admission to the University. Any scheme of admission is designed primarily to insure that the incoming students are qualified to do college work; that, in general, our students are so qualified, the gradually improving scholarship record made by them in the University is the best possible evidence.

Let us examine some possible explanations for this better scholarship, based upon considerations other than the simple fact of a real improvement in the work of the students. (1) It is true that women make higher scholarship records in the University than men do. A superficial observer might ascribe the higher scholarship record to the increasing number of women in the University. Relatively to the whole number of students, however, the number of women students is not increasing. In 1902 the percentage of women among the freshmen was 39+; in 1909, it was 39. In the eight years, 1902-1909, the percentage of women has never been less than 37+ and never greater than 42+. The highest percentage was in 1904; but the scholarship average for the class entering 1904, shows no change from the prevailing five-year average. So, too, while the percentage of women in 1902 was a fraction higher than it was in 1909, the scholarship average for 1902 is sixteen points lower than it is for 1909. (2) A study of the statistics shows a number of important changes in the relative enrollment in the several colleges; thus, the percentage of freshmen in the colleges of engineering has fallen from 32.55 in 1901 to 23.90 in 1909. In the College of Letters the percentage has fallen from 13.54 in 1901 to 5.66 in 1909; while in the College of Social Sciences there has been little change. The gains have taken place in the colleges of Commerce, Natural Sciences and Agriculture. It would be an interesting inquiry if one were to attempt to establish a scholarship rating for each of the colleges, in order to see whether the drift (mainly of men students) from the colleges of engineering to the colleges of Commerce, Natural Sciences, and

Agriculture is followed by higher scholarship records on the part of the students. (3) It may, of course, be assumed that higher grades of scholarship are due to a slackening of the standards of requirement on the part of the faculty. There seems to be no way of determining by any statistical process whether such deterioration be possible; but it is evidently absurd to suppose that such a factor would remain operative for half a dozen years and then suddenly, in 1909, leap into prominence. Furthermore, such an explanation would seem to be radically inconsistent with certain measures recently adopted by the faculties for the purpose of bringing about, on the part of freshmen particularly, a more thorough-going attention to class-room duties.

It seems to be a legitimate conclusion that our students are, for various reasons—some connected with the schools and some with the University—doing better work now than they did in former years.

TABLE II.

*Percentage of work done by freshmen from the California high schools in the five grades of scholarship.*

Year	I	II	III	IV	V	I and II (Combined)
1901	8.85	45.20	30.12	13.17	2.67	54.05
1902	9.87	40.10	33.80	14.10	2.20	49.97
1903	9.26	39.25	38.75	10.80	1.96	48.51
1904	12.20	40.38	35.47	10.45	1.65	52.58
1905	13.60	36.86	38.69	9.72	1.13	50.46
1906	11.75	40.07	35.06	11.03	2.09	51.82
1907	14.30	38.96	30.80	13.48	2.45	53.26
1908	13.98	37.09	36.00	11.06	1.87	51.07
1909	14.87	40.88	33.34	9.44	1.43	54.75
Aver.	12.08	39.86	34.67	11.47	1.94	51.83

The most notable facts shown in this table are the steadily increasing percentages of work done in grade I and the steadily decreasing amount done in grades IV and V. It appears that on the average approximately 52

per cent. of all work is done in grades I and II, and about 35 per cent. in grade III. This leaves about 13 per cent. of work in grades IV and V—the deficiency sections. While the total amount of work done in these two sections, as noted above, is decreasing, it is still too large. The closer personal attention which the University is now beginning to give the Freshman classes should soon result in a still greater decrease in the percentage of deficiency.

In tables III, IV, and V, respectively, are presented for the College of Letters, for the College of Social Sciences, and for the group of technical colleges, the following details for each year: (1) index figures, (2) number of students in each college available for this study, (3) whole number studied in all colleges, (4) percentage in each college of the whole number studied.

TABLE III.

*College of Letters.*

Year	Index Figure	No. in this College	No. in all Colleges	Percentage in this College
1901	2.37	52	383	13.58
1902	2.31	48	458	10.48
1903	2.26	30	401	7.48
1904	2.14	35	455	7.69
1905	2.17	29	391	7.42
1906	2.22	30	431	6.96
1907	2.36	15	428	3.50
1908	1.95	27	472	5.72
1909	1.99	31	546	5.68
Gen. Av. and Totals	2.20	297	3963	7.49

Table III shows for the College of Letters: (1) the exceptionally high index figure, which for the last two years is very markedly better than the prevailingly high average, (2) the steady decrease in the actual number of students entering the freshman classes, (3) the still more rapid decline in the number of students compared with the whole number entering all colleges.



TABLE IV.

*College of Social Sciences.*

Year	Index Figure	No in this College	No. in all Colleges	Percentage in this College
1901	2.45	153	383	39.95
1902	2.48	192	458	41.92
1903	2.48	172	401	42.89
1904	2.31	193	455	42.42
1905	2.35	181	391	46.29
1906	2.46	179	431	41.53
1907	2.31	195	428	45.56
1908	2.39	186	472	39.41
1909	2.33	227	546	41.57
Gen. Av. and Totals	2.39	1678	3963	42.34

In Table IV we notice that the index figure for the College of Social Science is, as a rule, close to the general index figure for all freshman work, but always a little above this; that the proportion of students in this college remains fairly constant, about an average of 42 per cent. of the whole.

TABLE V.

*Technical Colleges.*

(Engineering, Chemistry.)

Year	Index Figure	No in these Colleges	No. in all Colleges	Percentage in these Colleges
1901	2.73	125	383	32.64
1902	2.73	145	458	31.66
1903	2.70	147	401	36.66
1904	2.74	150	455	32.97
1905	2.70	98	391	25.06
1906	2.55	117	431	27.15
1907	2.90	131	428	30.60
1908	2.66	147	472	31.14
1909	2.65	131	546	23.99
Gen. Av. and Totals	2.71	1191	3963	30.05

A study of Table V brings out the following: that the average index figure of the technical colleges is low; that

it is below that of any other single college and much below the general index figure for all students in all colleges. The years 1905 and 1909 show a decided decrease in the percentage of students enrolled in the technical colleges; but, contrary to natural expectation, we find no corresponding improvement in the index figures for these years. The decrease seems to have been merely numerical and not selective.

The better index figures of the years 1908 and 1909 offer some improvement; but still everything points to the conclusion that, for whatever reason, compared with the students in other colleges, the students in the technical colleges are, to a very large extent, failing to do high grade work.

In my previous report, I discussed probable causes for this low standard of work in the technical colleges. To these reasons we may add that perhaps owing to the necessarily difficult work of these colleges, grades are expected to be lower than grades in other colleges. This should not be so. Probably the most hopeful outlook for better work in the technical colleges lies in the five-year course. That will still further reduce the proportion of students in these colleges and the reduction is likely to be selective as well as numerical.

Thus far, I have discussed the records made (1) by the whole number of freshmen in all colleges and (2) by the number enrolled in certain collegiate groups. Table VI. presents in detail, for the nine years, 1901-1909, inclusive, the following data:

(1) All California public high schools which recommended, or had the right to recommend, students for admission without examination to the freshman class of the University.

(2) The index figure for each school each year. By comparing this figure for a given year and school with the general index figure in Table I we see the rating of the school for that year.

(3) The number of students concerned in this study who so entered (*a*) from each school each year,—the number in parenthesis below the index figure; (*b*) from each school in the nine-year period;

(4) The number of students so entering—(*a*) from each “region” each year; and (*b*) from each region in the nine-year period.

(5) At the bottom of each “division” of the table, the caption, “Number schools eligible,” means the number of schools which had the right to recommend for admission to the University their graduates for the given year; the caption, “Number schools represented,” means the number of schools represented in the University by their graduates.

TABLE VI.

NOTE.—In the Table, a dash (—) standing alone without any other item indicates that for the year when it appears the school had not the right to "recommend" its graduates to the University; a zero in every case (with or without a dash) indicates that while the school had the right to "recommend," none of its graduates entered the University on recommendation.

*Division A.*

North Coast Region: Counties of Del Norte, Humboldt, Lake, Mendocino, Sonoma.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	men from this School
Arata	1.71 (1)	2.92 (3)	1.64 (1)	2.76 (4)	2.25 (1)	1.98 (1)	3.06 (3)	— (0)	— (0)	14
Overdale	—	—	—	2.35 (3)	2.46 (1)	— (0)	2.33 (1)	2.41 (2)	— (0)	7
Escent City	—	—	—	—	—	—	—	(0)	(0)	0
Reka	2.33 (2)	1.90 (2)	2.25 (6)	2.59 (4)	3.06 (3)	2.18 (6)	3.24 (1)	2.31 (3)	2.53 (10)	37
Arndale	—	—	—	—	—	—	2.68 (1)	2.50 (3)	2.40 (6)	10
rt Bragg	—	—	—	—	—	—	1.94 (1)	2.60 (2)	— (0)	3
rtuna	—	—	—	—	—	2.63 (2)	2.40 (1)	2.34 (3)	2.62 (2)	8
aldsburg	— (0)	2.08 (3)	2.76 (2)	— (0)	3.17 (2)	2.71 (2)	2.81 (1)	2.77 (4)	2.76 (3)	17
keport	—	—	—	—	2.46 (2)	— (0)	1.95 (1)	2.63 (4)	2.89 (1)	8
ndocino	2.80 (2)	2.59 (2)	2.89 (1)	— (0)	— (0)	— (0)	2.66 (3)	— (0)	2.98 (2)	10
taluma	2.25 (5)	2.27 (1)	2.80 (5)	2.59 (3)	2.85 (3)	2.16 (1)	2.89 (1)	2.73 (1)	2.23 (3)	23
nta Resa	2.78 (8)	2.44 (10)	3.09 (9)	2.64 (3)	2.87 (6)	2.44 (6)	2.87 (4)	2.62 (8)	2.76 (8)	62
sonoma	—	—	—	—	—	—	—	1.78 (0)	— (0)	1
cliah	2.43 (2)	2.64 (4)	2.77 (2)	2.80 (2)	2.19 (3)	2.42 (4)	1.49 (1)	2.34 (5)	2.47 (3)	26
illits	—	—	—	—	—	—	—	3.18 (2)	— (0)	2
(15)										
reshmen from this region	20	25	26	19	21	22	19	38	38	228
umber schools represented	6	7	7	6	8	7	12	12	9	
umber schools eligible	7	7	7	8	9	10	13	15	15	



## Division B.

North Interior Region: Counties of Butte, Colusa, Glenn, Sacramento, Shasta, Siskiyou, Sutter, Tehama, Trinity, Yolo, Yuba.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
Chico	—	—	—	—	3.80 (2)	2.47 (5)	2.99 (4)	2.86 (2)	2.17 (5)	18
College City	3.22 (2)	— (0)	3.29 (3)	2.69 (4)	— (0)	2.88 (2)	2.97 (1)	2.69 (1)	— (0)	13
Colusa	3.00 (1)	2.67 (1)	2.22 (2)	2.14 (1)	2.27 (1)	2.51 (3)	2.38 (2)	2.50 (1)	2.75 (1)	13
Corning	—	—	—	—	—	2.73 (1)	2.68 (2)	— (0)	1.70 (1)	4
Elk Grove	—	—	—	—	—	—	—	— (0)	2.95 (3)	3
Esparto	2.84 (1)	3.30 (1)	2.51 (4)	— (0)	— (0)	— (0)	— (0)	2.73 (1)	2.36 (1)	8
Etna	—	— (0)	3.06 (2)	2.19 (1)	— (0)	3.00 (1)	2.06 (5)	— (0)	2.82 (3)	12
Gridley	—	—	—	—	—	—	2.60 (2)	2.65 (1)	3.03 (1)	4
Marysville	2.82 (2)	2.76 (9)	2.49 (2)	2.29 (7)	2.12 (3)	2.15 (5)	2.69 (2)	— (0)	2.60 (4)	34
Oroville	2.50 (2)	3.13 (4)	2.51 (2)	2.57 (4)	2.95 (6)	4.05 (1)	— (0)	2.91 (1)	2.14 (2)	22
Red Bluff	— (0)	2.78 (4)	2.30 (2)	2.24 (2)	2.54 (1)	2.44 (2)	1.68 (3)	1.81 (2)	2.66 (5)	21
Redding	—	—	— (0)	— (0)	2.23 (1)	2.28 (2)	2.55 (5)	2.58 (3)	2.76 (1)	12
Sacramento	2.34 (4)	2.67 (18)	2.22 (7)	2.53 (18)	2.35 (12)	2.44 (14)	2.53 (10)	2.55 (21)	2.34 (17)	121
Sutter City	— (0)	— (0)	— (0)	— (0)	— (0)	— (0)	— (0)	— (0)	— (0)	
Willows	— (0)	— (0)	— (0)	— (0)	— (0)	2.64 (3)	3.24 (3)	— (0)	2.70 (1)	7
Winters	— (0)	2.70 (1)	2.28 (1)	— (0)	— (0)	— (0)	— (0)	— (0)	2.89 (2)	4
Woodland	2.21 (7)	2.77 (2)	— (0)	2.36 (6)	3.02 (5)	2.68 (3)	2.67 (7)	3.06 (3)	2.62 (3)	36
Yreka (18)	— (0)	2.97 (2)	3.11 (2)	— (0)	— (0)	2.58 (3)	2.61 (2)	2.86 (5)	2.48 (4)	18
Freshmen from this region	19	42	27	43	31	45	48	41	54	350
Number schools represented	7	9	10	8	8	13	13	11	16	
Number schools eligible	12	13	14	14	15	16	17	18	18	

### Division C.

any Region: Counties of Alameda, Contra Costa, Marin, Napa, San Francisco,  
San Mateo, Solano.

School AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
Amada	2.34 (11)	2.55 (12)	2.95 (4)	2.48 (13)	2.52 (11)	2.36 (14)	2.37 (13)	2.90 (11)	2.29 (18)	107
Antioch	—	—	—	—	—	—	—	(0)	(0)	
Benicia	2.94 (2)	— (0)	2.70 (5)	2.06 (1)	— (0)	— (0)	— (0)	— (0)	— (0)	8
Berkeley	2.62 (48)	2.77 (38)	2.60 (30)	2.64 (51)	2.67 (49)	2.42 (42)	2.47 (60)	2.42 (76)	2.41 (81)	475
Brentwood	—	—	—	—	—	—	—	(0)	(0)	
Brentville	3.13 (3)	2.31 (5)	2.53 (2)	3.73 (3)	2.08 (2)	2.60 (2)	2.91 (8)	3.11 (1)	2.38 (2)	28
Concord	—	—	—	— (0)	2.97 (4)	2.45 (4)	2.24 (4)	2.02 (1)	2.46 (1)	14
Crockett	—	—	—	—	—	3.00 (4)	3.37 (1)	2.07 (1)	— (0)	6
ixon	— (0)	2.83 (2)	3.38 (1)	— (0)	— (0)	— (0)	2.02 (3)	2.72 (1)	— (0)	7
Field	2.09 (1)	2.38 (2)	— (0)	2.18 (1)	— (0)	1.54 (1)	— (0)	— (0)	— (0)	5
Fruitvale	—	—	—	—	—	3.29 (1)	3.13 (3)	2.67 (3)	2.26 (8)	15
Haywards	2.57 (3)	2.24 (4)	— (0)	1.76 (2)	1.46 (1)	2.89 (1)	2.64 (4)	2.61 (4)	— (0)	19
Havermore	2.89 (2)	3.53 (3)	2.49 (1)	1.89 (1)	— (0)	2.15 (1)	— (0)	2.81 (1)	— (0)	9
Hartinez	—	—	—	—	—	2.44 (2)	— (0)	— (0)	2.15 (2)	4
Healdsburg	3.34 (1)	2.48 (11)	2.72 (5)	2.45 (6)	2.92 (2)	2.41 (4)	3.03 (4)	2.63 (3)	3.23 (2)	38
Healdland	2.56 (41)	2.51 (45)	2.51 (41)	2.52 (45)	2.36 (43)	2.55 (43)	2.41 (38)	2.34 (57)	2.32 (42)	395
Healdland Polytechnic	—	—	—	—	—	—	—	3.35 (1)	2.22 (4)	5
Healdwood	— (0)	3.31 (1)	— (0)	2.18 (1)	— (0)	— (0)	— (0)	— (0)	2.90 (1)	3
Richmond	—	—	—	—	—	—	—	— (0)	1.50 (1)	1

## Division B.

North Interior Region: Counties of Butte, Colusa, Glenn, Sacramento, Shasta, Siskiyou, Sutter, Tehama, Trinity, Yolo, Yuba.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
Chico	—	—	—	—	3.80 (2)	2.47 (5)	2.99 (4)	2.86 (2)	2.17 (5)	18
College City	3.22 (2)	— (0)	3.29 (3)	2.69 (4)	— (0)	2.88 (2)	2.97 (1)	2.69 (1)	— (0)	13
Colusa	3.00 (1)	2.67 (1)	2.22 (2)	2.14 (1)	2.27 (1)	2.51 (3)	2.38 (2)	2.50 (1)	2.75 (1)	13
Corning	—	—	—	—	—	2.73 (1)	2.68 (2)	— (0)	1.70 (1)	4
Elk Grove	—	—	—	—	—	—	—	— (0)	2.95 (3)	3
Esparto	2.84 (1)	3.30 (1)	2.51 (4)	— (0)	— (0)	— (0)	— (0)	2.73 (1)	2.36 (1)	8
Etna	—	— (0)	3.06 (2)	2.19 (1)	— (0)	3.00 (1)	2.06 (5)	— (0)	2.82 (3)	12
Gridley	—	—	—	—	—	—	2.60 (2)	2.65 (1)	3.03 (1)	4
Marysville	2.82 (2)	2.76 (9)	2.49 (2)	2.29 (7)	2.12 (3)	2.15 (5)	2.69 (2)	— (0)	2.60 (4)	34
Oroville	2.50 (2)	3.13 (4)	2.51 (2)	2.57 (4)	2.95 (6)	4.05 (1)	— (0)	2.91 (1)	2.14 (2)	22
Red Bluff	— (0)	2.78 (4)	2.30 (2)	2.24 (2)	2.54 (1)	2.44 (2)	1.68 (3)	1.81 (2)	2.66 (5)	21
Redding	—	—	— (0)	— (0)	2.23 (1)	2.28 (2)	2.55 (5)	2.58 (3)	2.76 (1)	12
Sacramento	2.34 (4)	2.67 (18)	2.22 (7)	2.53 (18)	2.35 (12)	2.44 (14)	2.53 (10)	2.55 (21)	2.34 (17)	121
Sutter City	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	(0)	
Willows	— (0)	— (0)	— (0)	— (0)	— (0)	2.64 (3)	3.24 (3)	— (0)	2.70 (1)	7
Winters	— (0)	2.70 (1)	2.28 (1)	— (0)	— (0)	— (0)	— (0)	— (0)	2.89 (2)	4
Woodland	2.21 (7)	2.77 (2)	— (0)	2.36 (6)	3.02 (5)	2.68 (3)	2.67 (7)	3.06 (3)	2.62 (3)	36
Yreka (18)	— (0)	2.97 (2)	3.11 (2)	— (0)	— (0)	2.58 (3)	2.61 (2)	2.86 (5)	2.48 (4)	18
Freshmen from this region	19	42	27	43	31	45	48	41	54	350
Number schools represented	7	9	10	8	8	13	13	11	16	
Number schools eligible	12	13	14	14	15	16	17	18	18	

ay Region: Counties of Alameda, Contra Costa, Marin, Napa, San Francisco,  
San Mateo, Solano.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
ameda	2.34 (11)	2.55 (12)	2.95 (4)	2.48 (13)	2.52 (11)	2.36 (14)	2.37 (13)	2.90 (11)	2.29 (18)	107
atioch	—	—	—	—	—	—	—	(0)	(0)	
enicia	2.94 (2)	— (0)	2.70 (5)	2.06 (1)	— (0)	— (0)	— (0)	— (0)	— (0)	8
erkeley	2.62 (48)	2.77 (38)	2.60 (30)	2.64 (51)	2.67 (49)	2.42 (42)	2.47 (60)	2.42 (76)	2.41 (81)	475
entwood	—	—	—	—	—	—	—	(0)	(0)	
nterville	3.13 (3)	2.31 (5)	2.53 (2)	3.73 (3)	2.08 (2)	2.60 (2)	2.91 (8)	3.11 (1)	2.38 (2)	28
ncord	—	—	—	(0)	2.97 (4)	2.45 (4)	2.24 (4)	2.02 (1)	2.46 (1)	14
ockett	—	—	—	—	—	3.00 (4)	3.37 (1)	2.07 (1)	— (0)	6
xon	— (0)	2.83 (2)	3.38 (1)	— (0)	— (0)	— (0)	2.02 (3)	2.72 (1)	— (0)	7
irfield	2.09 (1)	2.38 (2)	— (0)	2.18 (1)	— (0)	1.54 (1)	— (0)	— (0)	— (0)	5
uitvale	—	—	—	—	—	3.29 (1)	3.13 (3)	2.67 (3)	2.26 (8)	15
ywards	2.57 (3)	2.24 (4)	— (0)	1.76 (2)	1.46 (1)	2.89 (1)	2.64 (4)	2.61 (4)	— (0)	19
vermore	2.89 (2)	3.53 (3)	2.49 (1)	1.89 (1)	— (0)	2.15 (1)	— (0)	2.81 (1)	— (0)	9
artinez	—	—	—	—	—	2.44 (2)	— (0)	— (0)	2.15 (2)	4
pa	3.34 (1)	2.48 (11)	2.72 (5)	2.45 (6)	2.92 (2)	2.41 (4)	3.03 (4)	2.63 (3)	3.23 (2)	38
kland	2.56 (41)	2.51 (45)	2.51 (41)	2.52 (45)	2.36 (43)	2.55 (43)	2.41 (38)	2.34 (57)	2.32 (42)	395
kland Polytechnic	—	—	—	—	—	—	—	3.35 (1)	2.22 (4)	5
dwood	— (0)	3.31 (1)	— (0)	2.18 (1)	— (0)	— (0)	— (0)	— (0)	2.90 (1)	3
chmond	—	—	—	—	—	—	—	— (0)	1.50 (1)	1



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SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
St. Helena	2.57 (2)	2.33 (4)	3.07 (3)	2.56 (4)	2.72 (1)	— (0)	3.28 (3)	— (0)	3.19 (1)	18
San Francisco: Girls'	2.66 (16)	2.38 (24)	2.36 (13)	1.97 (21)	1.96 (16)	2.63 (15)	2.36 (14)	2.62 (9)	2.15 (18)	146
San Francisco: Lowell	2.28 (28)	2.12 (23)	2.29 (35)	2.22 (18)	2.08 (24)	2.24 (24)	2.15 (28)	2.22 (31)	2.20 (32)	243
San Francisco: Mission	2.35 (9)	2.86 (8)	2.53 (8)	2.47 (10)	2.62 (8)	2.44 (10)	2.45 (8)	2.45 (15)	2.31 (6)	82
San Francisco: Polytechnic	2.99 (6)	2.85 (9)	2.49 (11)	2.88 (14)	2.89 (7)	2.99 (9)	2.78 (2)	3.13 (2)	2.41 (3)	63
San Mateo	—	—	—	—	—	— (0)	3.10 (2)	— (0)	— (0)	2
San Rafael	3.07 (3)	3.22 (5)	3.45 (4)	2.84 (5)	3.22 (2)	3.10 (8)	2.73 (3)	2.73 (1)	3.05 (2)	33
Vacaville	3.36 (1)	2.45 (7)	2.89 (9)	2.57 (6)	2.75 (2)	3.04 (8)	2.67 (3)	— (0)	2.20 (1)	37
Vallejo (28)	3.27 (3)	2.93 (1)	2.77 (7)	2.60 (2)	2.48 (5)	3.43 (2)	2.55 (1)	2.68 (2)	2.97 (4)	27
Freshmen from this region	180	204	179	204	177	195	202	220	229	
Number schools represented	17	18	16	18	15	19	19	18	19	
Number schools eligible	19	19	19	20	20	23	24	28	28	

## Division D.

Central Interior Region: Counties of Fresno, Kern, Kings, Madera, Merced, San Joaquin, Stanislaus, Tulare.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
Bakersfield	2.55 (5)	2.80 (1)	2.57 (6)	2.18 (1)	2.62 (3)	2.85 (1)	1.92 (4)	2.49 (8)	2.43 (7)	36
Clovis	—	—	—	—	—	—	3.28 (2)	1.27 (1)	2.01 (2)	5
Dinuba	—	—	—	—	—	— (0)	2.27 (4)	— (0)	2.02 (1)	5
Fowler	—	—	—	2.69 (4)	— (0)	— (0)	3.44 (1)	3.38 (1)	2.52 (3)	9
Fresno	2.45 (6)	2.16 (9)	2.01 (2)	2.03 (5)	2.07 (5)	1.94 (2)	2.11 (3)	2.49 (4)	2.28 (8)	44

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SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Freshmen from this School
Hanford	2.56 (5)	3.03 (6)	2.11 (3)	2.49 (6)	1.90 (4)	2.79 (3)	2.27 (3)	2.63 (2)	2.02 (3)	35
Kingsburg	—	—	—	—	—	—	—	—	(0)	
Laton	—	—	—	—	—	—	—	—	2.49 (1)	1
Lemoore	—	—	—	—	—	—	—	2.84 (0)	2.91 (2)	3
Lodi	— (0)	— (0)	— (0)	— (0)	— (0)	— (0)	2.17 (2)	3.04 (2)	1.60 (4)	8
Los Baños	—	—	—	—	3.65 (1)	3.26 (2)	3.72 (1)	— (0)	— (0)	4
Madera	—	—	3.19 (1)	— (0)	— (0)	3.00 (2)	— (0)	— (0)	— (0)	3
Merced	— (0)	2.74 (3)	2.39 (5)	2.38 (1)	2.87 (1)	3.15 (5)	2.23 (8)	2.13 (1)	2.80 (1)	25
Modesto	2.73 (4)	2.24 (1)	2.41 (3)	2.06 (1)	3.00 (1)	— (0)	— (0)	2.11 (1)	1.92 (2)	13
Oakdale	1.97 (2)	3.29 (3)	3.39 (3)	— (0)	— (0)	2.60 (2)	— (0)	2.76 (2)	3.00 (1)	13
Oleander	— (0)	3.01 (2)	2.83 (4)	2.92 (4)	— (0)	2.35 (1)	2.34 (3)	— (0)	2.62 (2)	16
Porterville	2.88 (2)	2.22 (2)	— (0)	— (0)	2.69 (1)	— (0)	— (0)	3.08 (3)	2.39 (1)	9
Reedley	—	—	—	—	—	—	—	2.76 (0)	1.75 (1)	2
Sanger	—	—	—	— (0)	2.63 (2)	2.55 (2)	2.83 (1)	2.56 (5)	1.76 (1)	11
Selma	2.27 (2)	2.74 (3)	2.89 (2)	4.01 (2)	2.86 (3)	2.73 (3)	— (0)	1.74 (2)	2.19 (1)	18
Stockton	1.87 (6)	2.86 (5)	2.58 (7)	2.19 (10)	2.59 (11)	2.68 (10)	2.39 (6)	2.57 (7)	2.42 (16)	78
Tulare	3.54 (2)	2.29 (1)	2.62 (3)	— (0)	2.81 (3)	3.04 (4)	2.26 (1)	— (0)	2.33 (1)	15
Turlock	—	—	—	—	—	—	—	2.03 (1)	2.97 (1)	2
Visalia (24)	2.35 (2)	— (0)	2.59 (1)	2.65 (6)	2.50 (2)	2.42 (3)	3.36 (1)	2.99 (4)	1.87 (1)	20
Freshmen from this region	36	36	40	40	37	40	40	46	60	375
Number schools represented	10	11	12	10	12	13	14	17	21	
Number schools eligible	13	13	14	16	17	18	21	22	24	

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## Division E.

Central Coast Region: Counties of Monterey, San Benito, Santa Clara,  
Santa Cruz, San Luis Obispo.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Fresh men from this School
Arroyo Grande	—	—	—	—	2.58 (1)	— (0)	2.83 (2)	— (0)	— (0)	3
Boulder Creek	—	—	—	—	—	—	—	— (0)	3.80 (1)	1
Campbell	—	1.34 (1)	3.53 (1)	— (0)	— (0)	2.64 (1)	— (0)	— (0)	2.18 (1)	4
Gilroy	— (0)	2.69 (1)	— (0)	2.37 (3)	2.25 (3)	3.41 (1)	— (0)	2.19 (1)	— (0)	9
Hollister	2.70 (5)	2.73 (5)	2.52 (2)	3.25 (2)	3.41 (4)	2.89 (3)	— (0)	4.11 (1)	2.94 (2)	24
Los Gatos	— (0)	— (0)	— (0)	2.55 (1)	2.13 (3)	2.97 (3)	2.23 (2)	2.46 (1)	— (0)	10
Monterey	—	—	—	—	—	2.70 (1)	1.22 (1)	— (0)	1.97 (2)	4
Morgan Hill	—	—	—	—	—	—	—	(0)	(0)	
Pacific Grove	3.24 (3)	2.60 (1)	— (0)	2.25 (1)	2.55 (3)	2.58 (1)	— (0)	— (0)	— (0)	9
Mountain View	—	—	—	—	—	(0)	(0)	(0)	(0)	
Paso Robles	2.14 (2)	3.65 (2)	3.32 (2)	3.50 (1)	2.76 (2)	2.34 (2)	2.45 (5)	2.12 (1)	— (0)	17
Palo Alto	—	—	—	(0)	(0)	(0)	(0)	(0)	(0)	
Salinas	2.71 (2)	2.22 (5)	2.58 (3)	2.35 (1)	— (0)	— (0)	2.80 (3)	2.91 (4)	2.74 (3)	21
San Jose	2.68 (5)	2.46 (5)	2.15 (6)	2.37 (2)	2.22 (4)	2.31 (3)	2.57 (3)	2.58 (4)	2.64 (6)	38
San Luis Obispo	2.36 (2)	2.57 (6)	2.55 (4)	2.17 (5)	3.08 (2)	2.03 (1)	— (0)	2.50 (3)	2.88 (2)	25
Santa Clara	2.27 (2)	2.94 (1)	2.00 (1)	2.89 (2)	— (0)	2.16 (1)	— (0)	2.43 (2)	2.67 (1)	10
Santa Cruz	2.40 (7)	2.78 (5)	2.66 (9)	2.52 (12)	2.39 (8)	2.30 (4)	2.52 (9)	2.45 (5)	2.84 (4)	63
Watsonville (18)	2.79 (5)	2.55 (6)	2.87 (7)	2.42 (3)	2.79 (2)	3.09 (3)	3.02 (4)	— (0)	2.18 (2)	32
Freshmen from this region	33	38	35	33	32	24	29	22	24	270
Number schools represented	9	11	9	11	10	12	8	9	10	
Number schools eligible	11	12	12	13	14	16	16	18	18	

## Division F.

Southern California Region: Counties of Imperial, Los Angeles, Orange, Riverside, San Bernardino, San Diego, Santa Barbara, Ventura.

SCHOOL AT	1901	1902	1903	1904	1905	1906	1907	1908	1909	Total Fresh- men from this School
hambra	2.00 (1)	2.55 (1)	2.67 (2)	— (0)	— (0)	— (0)	— (0)	2.02 (1)	3.31 (1)	6
ahheim	2.33 (3)	3.77 (3)	2.71 (2)	2.93 (2)	2.21 (1)	2.38 (3)	— (0)	2.82 (3)	2.21 (2)	19
usa	2.89 (1)	3.80 (1)	2.65 (1)	2.91 (1)	— (0)	2.89 (1)	— (0)	1.77 (1)	— (0)	6
estonia	2.54 (1)	2.03 (1)	2.43 (2)	— (0)	— (0)	— (0)	— (0)	— (0)	1.81 (1)	5
ino	—	—	—	—	—	—	—	2.84 (1)	— (0)	1
lton	— (0)	— (0)	3.41 (1)	— (0)	— (0)	— (0)	— (0)	— (0)	— (0)	1
mpton	— (0)	— (0)	— (0)	2.77 (4)	2.92 (6)	1.86 (1)	— (0)	— (0)	— (0)	11
rona	— (0)	2.17 (1)	2.91 (2)	2.32 (3)	2.26 (3)	2.84 (2)	3.13 (1)	2.83 (1)	— (0)	13
vina	1.76 (1)	3.03 (1)	2.35 (3)	2.65 (3)	2.60 (2)	2.12 (1)	2.80 (1)	2.35 (1)	2.62 (6)	19
owney	—	—	—	—	—	—	3.41 (1)	— (0)	— (0)	1
Monte	—	—	—	—	—	—	—	(0)	(0)	
condido	2.58 (4)	2.36 (2)	2.95 (1)	2.82 (3)	2.66 (1)	— (0)	2.68 (1)	— (0)	2.38 (4)	16
llbrook	—	—	—	—	—	(0)	(0)	(0)	(0)	
lerton	2.65 (2)	2.84 (4)	2.19 (3)	2.65 (2)	2.66 (2)	2.62 (3)	— (0)	— (0)	2.98 (2)	18
rdena	—	—	—	—	—	—	—	— (0)	2.89 (3)	3
endale	—	—	—	—	(0)	(0)	(0)	— (0)	2.16 (1)	1
met	—	—	—	—	—	(0)	(0)	— (0)	2.60 (1)	1
ollywood	—	—	—	—	—	2.19 (1)	2.30 (3)	1.90 (3)	2.09 (5)	12
untington Beach	—	—	—	—	—	—	—	3.28 (1)	— (0)	1
perial	—	—	—	—	—	—	—	—	2.11 (2)	2
lewood	—	—	—	—	—	—	—	(0)	(0)	
upor	2.97 (2)	1.94 (1)	2.40 (2)	2.94 (6)	2.77 (2)	— (0)	— (0)	— (0)	— (0)	13
ng Beach	2.99 (5)	2.69 (3)	2.68 (1)	2.62 (3)	2.37 (4)	2.43 (6)	2.41 (4)	— (0)	2.67 (3)	29



From Table VI it appears that in all, 165 high schools have received the right to "recommend" their graduates to the University. Of this number, 150 have availed themselves of the privilege, and have been represented in the University by their graduates in one or more of the nine years. Only 32 schools have been continuously represented throughout the nine years. These 32 schools, being 19.5 per cent of the whole eligible number, have furnished 69.5 per cent of all freshmen from California high schools. Some of them are found in each of the geographic "regions," as may be seen from the table. Fifteen eligible schools have never had a representative in the University. Most, but not all, of these are schools of recent growth.

Further study of Table VI, with study of other data, reveals some interesting facts about the ratio of freshman enrollment to the total enrollment in the accredited high schools. In general, it seems clear that the proportion of high-school graduates in California who go directly from the high school to the university, as freshmen, without intermediate training in college or normal school, is gradually decreasing. While in some regions there has been a slight gain, for the whole state there has been a loss. This loss is probably more than offset by the increase in the number of students from the several regions of the state who attend a normal school or college before matriculating in the university as students in advanced standing. But the present study is confined solely to *freshmen*.

Table VII presents a succinct view of the facts for each region and for the whole state. The Table gives (1) the enrollment of pupils in accredited high schools for 1901 and 1909, with percentage of growth; and (2) the number from these schools entering the freshman class of the University for each of the two years named.

TABLE VII.

*High School Enrollment in the Several Regions of the State; and Representation Thereof in the Freshman Class.*

Region	High School enrollment 1901	High School enrollment 1909	Percentage of gain	Freshmen entering U.C. per 1000 1901	Freshmen entering U.C. per 1000 1909
North Coast	747	1,415	89.4	26.8	26.8
N. Interior	859	1,970	129.3	22.1	27.4
Bay Counties	3,443	6,447	87.2	52.3	33.9
Central Int.	1,312	3,019	130.1	27.4	19.9
Cent. Coast	1,357	2,587	90.6	24.3	9.3
So. Cal.	3,758	11,199	198.0	24.2	10.5
Mountain Co's.	152	850	459.0	26.3	27.1
Total	11,628	27,487	136.4	32.9	19.8

Thus we see that the proportion of freshmen per thousand of high-school pupils was in 1901 for the whole state, 32.9, while in 1909, it was only 19.8. That is, there was a decrease of 40 per cent. in freshman representation. Had the proportion of 1901 been maintained in 1909, the freshman class of the latter year would have numbered 1100 instead of the 700 it did number. Greatly as the University has grown numerically, its growth has not kept pace with that of the high schools.

There would seem to be two causes which might operate to produce the above effect. (1) Perhaps the high schools are becoming to a less degree preparatory schools for higher institutions, and are tending more to fit young people directly for their life work. The recent extension of high school studies in the direction of utility lends color to this view. The fact that the decrease has been greatest in the more populous regions supports this argument. (2) High-school graduates in larger numbers are attending other institutions of higher education which are found in the state. The fact that in southern California, where these other institutions most abound, the high-school enrollment has gained 198 per cent., while the University representation in freshmen has fallen 55.8 per cent., lends weight to this second

explanation. Lest these facts be misunderstood, we must note that increasing numbers of students from southern California now come to the University not as freshmen, but as students in the upper division and the graduate school, thus emphasizing that side of the University which has to do with advanced and professional, rather than with elementary, training. When the undergraduates who enter the University in advanced standing are taken into account, the undergraduate representation from the southern counties is found to be steadily increasing—both absolutely and relatively to the representation from other districts of the state.

In Table VIII below, is given the general scholarship record made by regular freshmen who entered the University from schools outside of California in August of the years 1905-1909, inclusive. The index figure for each year is exactly comparable with the California high-school index figure for each of the corresponding years, which is herewith repeated from Table I.

TABLE VIII.

*Freshmen from non-California Schools.*

	Non-California Index Figure	California Index Figure	No. non- California Students	California Students	Total Number Students	Percentage Non-California Students
1905	2.88	2.48	40	460	500	8.00
1906	2.54	2.51	52	488	520	9.62
1907	2.77	2.50	58	479	537	10.80
1908	2.57	2.49	75	563	638	11.75
1909	2.56	2.41	65	628	693	9.38

From this Table it is clear that the students from non-California schools make in general a decidedly lower scholarship record than do the students from California high schools.

In no year is the non-California index figure so good as is the California index figure of the poorest year; and only in one year, 1906, does the former even approximate the latter.

It is noticeable, also, how small is the number, both absolute and relative, of the non-California students. There has been, however, a steady growth, interrupted only in 1909. While the percentage of the whole number remains very small, the relative percentage of growth has been larger even than has been the corresponding growth in the number of students from California. For the years 1905-1909 the net gain of students from California schools was 36.52 per cent.; the net gain of students from non-California schools was 62.50 per cent.

TABLE IX.

*Students from California Schools and from Outside Schools Compared.*

Percentage of work done in the five grades of scholarship.

Year	I	II	III	IV	V	Non-California Schools: I and II Combined	California Schools: I and II Combined
1905	5.08	19.09	59.47	12.12	3.49	24.17	50.46
1906	13.79	36.09	35.66	11.55	2.91	49.88	51.82
1907	7.55	33.65	36.23	19.77	2.78	41.20	53.46
1908	13.52	35.83	34.82	11.06	4.06	49.35	51.07
1909	15.38	34.59	32.18	15.94	2.71	49.97	54.75
Average							
5 Years							
Non-Cal- ifornia							
Schools	11.06	30.85	39.67	14.09	3.19	42.91	52.27
Average							
5 Years							
Cali- fornia							
Schools	13.70	38.77	34.78	10.95	1.79		

Table X below, refers again to freshmen from schools outside of California. It is given for purposes of comparison with like data concerning freshmen from California schools. The study covers the years 1905 to 1909; and in it no segregation of public schools from private schools is attempted.

Interpretation of the Table:

In the columns reserved for the several years, in the space after the name of each state or country—



(a) The scholarship record (*index figure*) is represented by the upper numeral,

(b) The number of *freshmen* concerned is shown by the number in parenthesis below on the left.

(c) The number of *schools* represented is shown by the numeral below to the right of the parenthesis.

Other details are self-explanatory.

TABLE X.

*Representation from Schools Outside of California.*

(See above for explanation.)

STATES	1905	1906	1907	1908	1909	Total No. Freshmen	Percentage of Whole
Arizona	3.43 (2)-2	.....	.....	3.30 (2)-2	2.67 (2)-2	6	2.07
Canada	.....	.....	.....	2.67 (1)-1	.....	1	.35
China	2.56 (5)-1	.....	2.83 (1)-1	2.88 (5)-2	.....	11	3.80
Colorado	2.87 (4)-4	2.77 (2)-2	3.18 (3)-3	2.76 (4)-4	2.20 (1)-1	14	4.83
Denmark	.....	3.38 (1)-1	2.06 (1)-1	.....	.....	2	.69
District Columbia	3.22 (1)-1	.....	.....	.....	2.10 (3)-2	4	1.38
England	.....	.....	2.80 (1)-1	.....	.....	1	.35
Germany	3.08 (1)-1	3.78 (1)-1	.....	.....	.....	2	.69
Hawaii	.....	1.92 (4)-1	2.41 (3)-2	2.38 (6)-1	2.37 (4)-2	17	5.86
Idaho	.....	2.03 (1)-1	3.39 (2)-1	2.60 (3)-2	.....	6	2.07
Illinois	2.88 (10)-9	3.38 (1)-1	.....	2.20 (4)-3	2.40 (3)-3	18	6.20
Indiana	.....	3.18 (2)-1	2.49 (2)-2	2.36 (1)-1	2.44 (1)-1	6	2.07
Iowa	4.09 (1)-1	2.34 (3)-2	3.37 (1)-1	2.52 (6)-3	2.36 (3)-3	14	4.83
Japan	.....	.....	4.00 (1)-1	.....	2.50 (1)-1	2	.69
Kansas	.....	2.03 (1)-1	.....	.....	.....	1	.35
Maine	.....	.....	.....	3.15 (1)-1	.....	1	.35
Maryland	.....	.....	.....	.....	1.49 (1)-1	1	.35
Massachusetts	3.33 (1)-1	.....	2.64 (1)-1	2.31 (3)-3	1.86 (1)-1	6	2.07
Michigan	2.72 (1)-1	.....	2.10 (5)-5	2.58 (3)-3	3.04 (4)-4	13	4.48

STATES	1905	1906	1907	1908	1909	Total No. Freshmen	Percentage of Whole
Minnesota	.....	2.96 (2)-1	3.08 (5)-4	2.52 (9)-7	2.06 (1)-1	17	5.86
Missouri	2.79 (2)-2	2.26 (2)-2	.....	3.20 (2)-2	2.72 (3)-3	9	3.10
Montana	3.05 (1)-1	2.62 (2)-2	2.67 (3)-2	2.69 (1)-1	2.25 (1)-1	8	2.75
Nebraska	2.16 (1)-1	.....	2.75 (2)-2	.....	2.79 (4)-4	7	2.42
Nevada	.....	.....	3.13 (1)-1	.....	2.11 (2)-2	3	1.04
New Jersey	.....	.....	4.00 (1)-1	2.51 (1)-1	2.08 (1)-1	3	1.04
New Mexico	.....	.....	2.55 (1)-1	3.24 (1)-1	.....	2	.69
New York	.....	.....	.....	2.80 (1)-1	3.30 (1)-1	2	.69
New Zealand	.....	.....	.....	1.49 (1)-1	1.74 (1)-1	2	.69
North Dakota	.....	.....	.....	2.13 (1)-1	.....	1	.35
Ohio	3.14 (4)-4	.....	2.78 (4)-4	.....	3.41 (2)-2	10	3.42
Oregon	2.68 (4)-2	2.50 (16)-5	2.64 (7)-3	2.62 (8)-6	2.67 (8)-6	43	14.83
Pennsylvania	.....	.....	.....	2.20 (1)-1	2.53 (2)-2	3	1.04
Philippine Islands	.....	.....	3.04 (1)-1	.....	.....	1	.35
Russia	.....	.....	.....	.....	3.07 (1)-1	1	.35
Scotland	.....	.....	2.62 (1)-1	.....	.....	1	.35
South Carolina	.....	.....	2.82 (1)-1	.....	.....	1	.35
South Dakota	.....	.....	.....	.....	3.26 (2)-2	2	.69
Switzerland	.....	2.53 (1)-1	.....	.....	.....	1	.35
Tennessee	.....	.....	3.09 (2)-2	.....	2.27 (1)-1	3	1.04
Texas	.....	1.95 (3)-2	.....	2.41 (1)-1	2.78 (2)-2	6	2.07
Utah	.....	2.40 (1)-1	2.90 (1)-1	3.00 (1)-1	2.36 (2)-1	5	1.72
Vermont	.....	.....	.....	.....	2.62 (1)-1	1	.35
Washington	2.79 (2)-2	2.76 (7)-4	2.55 (6)-3	2.50 (6)-2	2.64 (4)-3	25	8.62
Wisconsin	.....	2.09 (1)-1	3.55 (1)-1	2.31 (2)-2	2.54 (2)-2	6	2.07
Wyoming	.....	2.53 (1)-1	.....	.....	.....	1	.35
(45) Totals	40	52	58	75	65	290	

From the foregoing table we find that in the five years studied, 45 states or countries outside of California have been represented by 290 students in the freshman classes. Of these, 12 have been foreign countries, which have been represented by 42 students; 14.5 per cent of the whole. Forty-eight of these, or  $66\frac{2}{3}$  per cent came from China and the Hawaiian Islands. No other country had a representation of more than two students in the five years. Thirty-three states of the Union furnished 258 students. Of these, 62 per cent came from the following states in the following order:

Oregon	43
Washington	25
Illinois	18
Minnesota	17
Colorado	14
Iowa	14
Michigan	13
Ohio	10
	<hr/>
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These states, except Ohio, are, in nearly all cases, represented irregularly each year. In the case of all other states, the representation is irregular, and so small in number as to be of slight importance.

Thus we see that our non-California representation comes mainly from the states of the mountain-coast region, and of the northern middle-west.

Respectfully submitted,

W. SCOTT THOMAS,  
University Examiner of Schools.

## THE ALUMNI SECRETARY

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: The Alumni Association of the University of California is composed of all persons who have received degrees from any department of the University; a body of eight thousand five hundred people. Its purpose, as explained in the Constitution, is "the promotion of good fellowship and kindly feeling among its members, the fostering of scientific and liberal culture on the Pacific Coast and the advancement of the interests of the University of California." The work of the Association is directed by its officers and councilors, who are elected at the annual May meeting of the Association. The officers are chosen for one year, while the councilors serve for two years. Those who occupy these offices are: James K. Moffitt, '86, President; Orrin K. McMurray, '90, First Vice-President; Miss Jessica B. Peixotto, '94, Second Vice-President; Perry T. Tompkins, '92, Treasurer; Milton T. Farmer, '09, Secretary; Councilors—Frank Otis, '73, George Edwards, '84, Wallace I. Terry, '90, M. '92, C. Chapel Judson, Haydn M. Simmons, '96, Duncan McDuffie, '99, Louis Graham, D.D.S., '04, Max Thelen, '04, Ralph P. Merritt, '07.

In 1907, the Secretary of the Alumni Association was made a paid officer, his work being done in connection with the Appointment secretary's office in the University. This connection was maintained for three years, but at present the Alumni Secretary is no longer Assistant Appointment Secretary, but it happens that he is also Graduate Manager of the Associated Students of the University. In this way the office has kept a close connection with the members of the Association through other circles, as well as that of the Alumni Association. The work of the Secretary at



present may be classified under three heads,—the management of the California Alumni Weekly; the maintenance of geographical and class catalogues of the Alumni; coöperation with the Class Secretaries, Club Secretaries, and various University officers whose work brings them in touch with the graduates of the University.

The California Alumni Weekly was established in February, 1909. It is a four-sheet publication, appearing on Saturdays during the college year. It has twelve hundred subscribers and is distributed very widely throughout North America, as well as in more remote parts of the world. Still, the great body of its readers have Bay City residence, and it is the policy of its editor to make the paper something more than a restatement of news items concerning the University. At present, the paper is a creditable one, but is not yet up to the standard of a half-dozen papers published in Eastern universities, the chief reason for this being, of course, a financial one. It has never asked nor received support from the University, so that it should not be compared to, say, the Michigan or Illinois Alumni publications. The paper has been run economically, and up to date the manager has been able to make ends meet. A larger circulation is desirable.

The Alumni directory is in pretty good shape, having reaped many advantages from the recent Jubilee Celebration, at which time the Alumni officers were very actively engaged in hunting up class-mates and fellow Alumni. The Regents of the University have recently voted to publish this Directory and to sell it for \$1 a copy. Such a book meets a much felt want and places the University of California in line with other great universities which publish such books, usually at five-year intervals. The value of the Alumni catalogue to the administrative officers of the University, and to the Alumni Association as well as to its members is such as to very strongly warrant its regular publication. It might be put to some misuse by advertisers, but such occurrences have not happened in the last two years.

In conjunction with the officers of the California Clubs, the Alumni secretary, as well as other officers of the Association, have been able to render considerable assistance. Fifteen such clubs are now recorded, being located as follows:

- Chicago—C. H. Norwood, Secretary, 1107 Fisher Bldg.
- Seattle—Robert Munro, Secretary, 806 Western Ave.
- New York—Dr. Newel Perry, Secretary, 519 W. 123d St.
- Los Angeles—E. W. Oliver, Secretary, 343 South Bunker Hill Ave.
- Bakersfield—Miss Irma Weill, Secretary, 1627 17th St.
- Transvaal—Percy Newhall, Secretary, Knights.
- Redding—McCoy Fitzgerald, Secretary, Box 86.
- San Jose—L. D. Bohnett, Secretary, Bank of San Jose Bldg.
- San Francisco—J. G. DeRemer, Coleson Bldg.
- Reno—E. S. Brown, 752 N. Centre St.
- Fresno—David Barnwell, County Clerk's Office.
- Hanford—Mrs. R. Hall.
- Porterville—Chas. Premo.
- Santa Rosa—Miss Mabel Crane, 813 N. Cherry St.

In connection with the Association of Class Secretaries, the Alumni Secretary has been able to further the organization of classes and recently to devise a plan of class reunions, modeled after the "Dix-Princeton System."

The LeConte Memorial Fellowship, established by the Association a decade ago, continues to serve its original purpose, the present holder being Mr. Julius Klein, '07, a graduate student in economics at Harvard University.

This list of activities cannot be further extended here, but the Association is of value to the University both positively and negatively, and is succeeding in the promotion of good fellowship and kindly feeling among its members.

Respectfully submitted,

MILTON T. FARMER,  
Secretary.

## THE APPOINTMENT SECRETARY

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BERKELEY, July 1, 1910.

*To the President of the University,*

SIR: The year 1910, which witnessed the celebration of the Golden Jubilee of the College of California, gave a great impetus to the work of the Appointment Secretary's office. The enthusiasm which such an occasion engenders communicated itself to thousands of the alumni, and men who had not visited the campus in twenty years came to see with their own eyes what they could only dimly comprehend at long range from printed reports. This seemed a favorable opportunity to carry forward a plan which the Appointment Secretary had had in mind for several years—nothing more nor less than the compiling of a history of each and every one of the 8,500 graduates of the University, from the class of four graduated in 1864 to the 576 who received their degrees on May 18, 1910. With the help of the Alumni Secretary and the directories of graduates issued by the University from time to time, practically a complete list of the graduates had been obtained. The aim was to send to all of the graduates of each of the colleges a record blank, asking for full particulars in regard to the work they were doing in the world. Such records are kept at all the leading universities, and constitute a most valuable mass of economic data.

Some of the older graduates who have prospered, and who do not expect promotion through the efforts of the Appointment Secretary's office, demurred, but when told that the state had invested money in their education and training, and wanted information as to whether it was money

well invested, they complied gracefully. A manufactory which costs its guarantors over a million dollars a year should justify the expense by the quality of its output. The Appointment Secretary wishes to establish beyond question the fact that the graduates whose preparation for their life work was obtained at the expense of the State of California have returned many times the cost in loyal service.

Incidentally these records will be of service in the growing work of answering requests for graduates of the University with the requisite training and experience to fill responsible positions. Thirteen years ago, the Regents established in connection with the office of the President of the University a registry, where the names of graduates are entered and full particulars about them filed. A Secretary was placed in charge of the classified lists of candidates, and was expected to have personal knowledge of each candidate, and to secure evidence in regard to his scholarship, experience, adaptability, and effectiveness. As was natural the teachers were the first to avail themselves of this means of communication with appointing authorities, and as many requests were constantly coming to the President's office, the time of the Secretary was largely occupied with the candidates for one profession. It is a comparatively simple matter to deal with one class of candidates and with definite officials whose names may be obtained from printed lists. It is quite another thing to secure definite information in regard to the effectiveness of bacteriologists, bank clerks, botanists, brokers, chemists, dairy experts, architects, foresters, law clerks, engineers of all kinds, not to speak of librarians, stenographers, playground workers, insurance agents, and candidates for the consular service, to quote at random from the list of occupations covered by the blanks which have been prepared. During last year the Alumni Secretary was able to give half of his time to the work of registering these new classes of candidates. Since his desertion, or promotion to the position



of graduate manager, Irving Markwart of the class of December, 1910, has been employed as Assistant Appointment Secretary, and has undertaken the task of making the registration of the graduates of the technical colleges complete. Their field is the whole world. The success that has attended the efforts of the Appointment Secretary to do justice to these graduates gives welcome promise of what may be accomplished, when the graduates who have wandered half way round the world learn that it is worth while to keep the central office informed of their whereabouts and ambitions. The importance of the positions daily referred to the President's office increases with each year, and such positions can not be filled with recent graduates, or with those who have been only moderately successful. It is the best men we want to hear from, and that is the reason we are beginning with the first graduate of each college, and tracing every one. When the roll is complete, we shall know what each man and woman is doing, what remuneration would be an inducement to make a change, and then the proper person will be available for the best position that may offer.

Respectfully submitted,

MAY L. CHENEY,  
Appointment Secretary.

## UNIVERSITY MEETINGS\*

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1908.

- August 17—President Benjamin Ide Wheeler.
- August 28—George Burman Foster, Professor of the Philosophy of Religion, University of Chicago.  
George Malcolm Stratton, Professor of Psychology.
- September 11—Kendric C. Babcock, President of the University of Arizona.  
Rev. Jay. G. Rodger, Lecturer on Religious Evidences.
- September 25—Rev. George C. Eldredge, Minister of St. John's Presbyterian Church, Berkeley.  
Charles Mills Gayley, Professor of the English Language and Literature.
- October 9—Rev. Frederick W. Clappett, Rector of Trinity Church, San Francisco.  
Edward Bull Clapp, Professor of the Greek Language and Literature.
- October 23—Hon. Warren R. Porter, Lieutenant-Governor of California.  
Captain E. M. Lewis, Professor of Military Science and Tactics.
- November 13—Hon. Frank Otis, '73, Member of the State Legislature.  
Charles H. Bentley, '91, of San Francisco.  
Edmond O'Neill, '79, Professor of Inorganic Chemistry.
- November 20—In Memory of Guy Hall Roberts, Assistant Professor of Political Science: the speakers were members of the faculty and student body.

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\* The university meetings are held on alternate Fridays at eleven o'clock, when all other university exercises are suspended.

December 4—Rev. Charles A. Ramm, of St. Mary's Cathedral,  
San Francisco.

Charles Foster Kent, Professor of Biblical Literature,  
Yale University.

1909.

January 15—John Graham Brooks, of Cambridge, Massachusetts.  
William Albert Nitze, Professor of Romanic Languages.

January 29—Horace Davis, of San Francisco, formerly President  
of the University.

G. O. Shields, President of the League of American  
Sportsmen.

February 12—Lincoln Centennial: Dr. Charles Fletcher Dole, of  
Boston.

John Graham Brooks, of Cambridge, Massachusetts.

February 26—Julius Stieglitz, Professor of Chemistry, University  
of Chicago.

Richard Gause Boone, Lecturer in Education.

March 12—Albert H. Elliot, '91, President of the City Council  
of Oakland.

Rev. H. R. Miles, Minister of the First Congregational  
Church of Berkeley.

March 26—The Right Honourable James Bryce, British Ambassador  
to the United States.

April 9—Norman Hackett, Esq.

Hon. C. C. Young, '92, Member of the State Legislature.

Hon. John W. Stetson, '93, Member of the State  
Legislature.

April 23—Miss Maude Cleveland, Miss Lillie Sherman, J.  
Warren McKibben, Hubert D. Hoover, George L.  
Bell, William J. Hayes, Clare Crossfield, Cedric  
Cerf, and Stephen W. Cunningham.

August 16—President Benjamin Ide Wheeler.

August 27—Rev. George Adam Smith, Professor of Old Testament Language, Literature, and Theology, United Free Church College, Glasgow.

Wesley Clair Mitchell, Professor of Political Economy on the Flood Foundation.

September 10—The Right Rev. D. J. O'Connell, Auxiliary Bishop of San Francisco, formerly President of the Catholic University of America.

September 24.—Sir Augustus D. Waller, Director of the Physiological Laboratory, University of London.

Armin O. Leuschner, Professor of Astronomy and Director of the Students' Observatory.

October 8—John Fryer, Agassiz Professor of Oriental Languages and Literature.

October 22—Hon. Amos P. Wilder, American Consul-General at Shanghai.

November 5—Bishop P. T. Rowe, of Alaska.

Bernard Moses, Professor of History and Political Science.

November 19—Col. George C. Edwards, Associate Professor of Mathematics.

Hon. Everett J. Brown, '98, Judge of the Superior Court of Alameda County.

December 3—In Memory of Irving Stringham, Professor of Mathematics: the speakers were members of the faculty and student body.

#### 1910.

January 14—Rev. Joseph W. Cochran, Corresponding Secretary of the Board of Education of the Presbyterian Church.

David P. Barrows, Professor of Education.

January 28—George W. Dickie, of the Merchant Marine League of California.

February 11—Dr. Morton Prince, Special Lecturer in Abnormal Psychology.

William L. Finley, '03, Lecturer and Field Agent of the National Association of Audubon Societies.



- February 25—Programme of Music: University Band, Treble Clef Society, Mandolin Club, Glee Club, and University Orchestra.
- March 11—Mrs. Maud Ballington Booth, Commander in Chief of the Volunteers of America.
- April 1—Rev. Frank L. Goodspeed, Minister of the First Presbyterian Church, Oakland.  
Hon. Beverly L. Hodghead, Mayor of Berkeley.
- April 29—Miss Martha A. Chickering, Stephen W. Cunningham, J. A. D. Brookman, Chaffee E. Hall, Stuart O'Melveny, Herbert S. Johns, Fayette A. Lewis, Donald Y. Lamont, George A. Haines.

## LECTURES AND ADDRESSES\*

## SUMMER SESSION, 1908.

Professor H. W. Fairbanks, Associate Editor *Nature Study Review*:  
Illustrated lecture on "The Scenery of the Mt. Whitney  
Region," June 24.

Dr. M. Vincent O'Shea, Professor of the Science and Art of Educa-  
tion in the University of Wisconsin:

A public lecture on "Hidden Forces in Life and Education,"  
June 26.

## Greek Conference:

"The Place and Object of the Study of Greek," addresses by  
President Benjamin Ide Wheeler, Professor E. C. Norton  
(Pomona College), and others, June 30.

"The Relation of Greek to Other Subjects," discussion opened  
by Mr. Charles B. Gleason (San Jose), July 1.

"Needed Changes in the Presentation of Greek," discussion  
opened by Professor J. T. Allen, July 1.

Dr. William Lyon Phelps, Professor of English Literature in Yale  
University:

A public lecture on "The Novel of To-day," July 1.

Dr. Calvin Thomas, Professor of Germanic Languages and Litera-  
ture in Columbia University:

A public lecture on "The Evolution of Tragedy with Special  
Reference to the Tragedy of Fanaticism," July 3.

Dr. Benjamin Ide Wheeler, President of the University:

A public lecture on "Language and the Natural Man," July 8.

Dr. Robert Grant Aitken, Astronomer, Lick Observatory, Mount  
Hamilton, California:

A public lecture on "The Story of the Star," July 10.

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\* This list includes lectures delivered under the auspices of the  
University or connected organizations, by visiting educators, public  
men, etc., and by members of the faculty, outside of their regular  
courses.

Mr. Robert Herrick, Professor of English, University of Chicago:  
A public lecture on "Modern Journalism," July 15.

Mr. Findley Burns, of the United States Bureau of Forestry:  
A series of six lectures on "Forestry," beginning July 16.

Mr. Andrew Cunningham McLaughlin, Professor of History in the  
University of Chicago:  
A public lecture on "American History," July 17.

Dr. Gifford Pinchot, United States Forester:  
A public lecture on "Forestry," July 22.

Professor Edmund O'Neill, Dean of the College of Chemistry:  
A lecture on "Liquid Air," July 24.

Professor E. J. Wickson, Dean of the College of Agriculture:  
A public lecture on "Luther Burbank and His Work," July 27.

Dr. William Lyon Phelps, Professor of English Literature in Yale  
University:  
A public lecture on "Present Condition and Tendencies of the  
Drama," July 29.

Mr. Percy Mackaye, dramatist:  
A public lecture on "The Drama of Democracy," July 31.

#### FIRST HALF YEAR 1908-09.

Dr. George Burman Foster, Professor of the Philosophy of Religion  
in the University of Chicago:

Annual address before the Philosophical Union on "The Function of  
Religion in the Human Struggle for Existence," August 28.

Public lecture on "The Function of the Church in Modern  
Life," September 1.

Dr. Benjamin Ide Wheeler, President of the University:  
A public lecture before the Association of Collegiate Alumnae  
on "Recent Readjustments in the College Course," Sep-  
tember 2.

Mr. Henry Morse Stephens, Professor of History:  
A public lecture before the Association of Collegiate Alumnae  
on "Research Work for Women," September 2.

Mr. Charles Gilman Hyde, Professor of Sanitary Engineering:  
A public lecture on "Public Sanitation," September 2.

Dr. George R. Dodson, of St. Louis:  
A public lecture on "Pragmatism: The Present State of the  
Controversy," September 4.

- Dr. George R. Noyes, Assistant Professor of Slavic Languages:  
A public lecture on the "Life and Work of Tolstoy," September 10.
- Mr. C. W. Wells, Assistant Professor of English Composition:  
A public lecture on "The Literary Art of Tolstoy," September 10.
- Rev. Earl M. Wilbur, Dean of the Pacific Unitarian School, Berkeley:  
A public lecture on "The Religion of Tolstoy," September 10.
- Dr. E. Percival Lewis, Associate Professor of Physics:  
A public lecture on "Electromagnetic Properties of Luminous Vapors with Applications to Recently Discovered Solar Phenomena," September 11.
- Mr. H. A. Overstreet, Associate Professor of Philosophy:  
Lecture before the Kosmos Club on "What is Pragmatism," September 14.
- Mr. Adolph van Hemert-Engert, Reader in German.  
Lecture before the Deutscher Verein on "Eine Gebirgstour," September 14.
- Mr. Ng Poon Chew, Editor Chung Sai Yat Po, Oakland, California:  
Lecture before the College of Commerce on "The Future of China," September 14.
- Mr. Gustave Fauchaux, Instructor in French:  
French department lecture, open to the public, on "Geographical Study of France—Unity and General Structure—Influence of Geographical Conditions on the Character of the Nation," September 15.
- Dr. Jacques Loeb, Professor of Physiology:  
Lecture before Sigma Xi on "The Fertilization of Sea Urchin Eggs with the blood of Mammals and its Bearing on the Theory of Fertilization," September 16.
- Mr. Frank Soulé, Professor of Civil Engineering, Emeritus:  
A public lecture under the auspices of the Civil Engineering Association dealing with experiences in Europe, September 18.
- Mr. Guy Wilkinson, of London:  
Lecture before the College of Commerce on "Business Life in England," September 21.



- Dr. George R. Noyes, Assistant Professor of Slavic Languages:  
Lecture before the Russian Circle on "Tolstoy and Hawthorne, Comparisons and Contrasts," September 24.
- Dr. Elmer E. Hall, Assistant Professor of Physics:  
Physics Department lecture on "Incandescent Lamp Filaments," September 25.
- Dr. T. C. Burnett, Assistant in Physiology:  
Lecture before the Philosophical Union, open to the public, on "The Physico Chemical Basis of Living Matter," September 25.
- Hon. William R. Davis, '74, Ex-Mayor of Oakland:  
Public lecture before the Law Association on "Our Constitutions: their relation to us and our relation to them," October 2.
- Dr. Carl C. Plehn, Associate Professor of Finance, on the Flood Foundation:  
Lecture before the College of Commerce on "Tax Reform in California," October 5.
- Dr. W. C. Blasdale, Assistant Professor of Chemistry:  
Lecture before the Kosmos Club on "Some Metaphysical Problems Pragmatically Considered," October 5.
- Dr. George F. Reinhardt, Professor of Hygiene and University Physician:  
Lecture on "Hospitals: what they are and what they ought to be," October 7.
- Mr. H. D. Babcock, Assistant in Physics:  
Physics Department lecture on "Variation of Resistances with Humidity," October 9.
- Mr. S. L. Brown, Whiting Fellow in Physics:  
Physics Department lecture on "Distributed Capacity in Resistances," October 9.
- Hon. John Barrett, Director of the International Bureau of American Republics:  
A public lecture on "Our Sister American Republics: Wonderlands of Opportunity," October 9.
- Mr. Gustave Faucheux, Instructor in French:  
French department lecture, open to the public, on "Races which have contributed to the formation of the French nation: what it owes to each of these," October 13.

Dr. E. Percival Lewis, Associate Professor of Physics:

Lecture before the Sigma Xi Society on "Some Recent Discoveries in Solar Physics," October 14.

Mr. Carl Heise, of the Westinghouse Electric and Manufacturing Company:

Lecture before the Associated Electrical and Mechanical Engineers on "Single Phase Alternating Current Railway Systems," October 21.

Dr. A. W. Gray, Instructor in Physics:

Physics Department lecture on "The Pinch-Phenomenon and its application to the construction of the Mercury," October 23.

Mr. Marsden Manson, of San Francisco:

Civil Engineering Association lecture on "Problems of Municipal Water Supply," October 23.

Mr. G. W. Dickie, President of the Technical Society of the Pacific Coast:

Lecture before the College of Commerce on "The Commerce of the Pacific," October 26.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "French Character as seen in French History and Institutions," October 27.

Mr. T. A. Rickard, Editor of the Mining and Scientific Press:

Lecture before the Mining Association on "Mine Sampling," October 27.

Dr. W. J. V. Osterhout, Associate Professor of Botany:

Lecture before the Philosophical Union, open to the public, on "The Continuity of Life," October 30.

Dr. T. S. Elston, Instructor in Physics:

Physics department lecture on "Facts and Inferences about Banded Spectra," November 6.

Mr. Oliver M. Washburn, Instructor in Latin:

Lecture on "The Greek Temple," November 9.

Mr. Walter E. Dennison, of the State Board of Harbor Commissioners:

Lecture before the College of Commerce on "The Harbor Front of San Francisco," November 9.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "French Character as seen in the French Language, Literature and Art," November 10.

Mr. William D. Armes, Associate Professor of English Literature:  
Illustrated lecture on "Chaucer and His England," November 11.

Mr. Charles M. Schwab, President of the Bethlehem Steel Corporation:  
Address, open to the public, California Hall, November 12.

Mr. Oliver M. Washburn, Instructor in Latin:  
Lecture on "Delphi and the Oracle of Apollo," November 16.

Dr. W. J. V. Osterhout, Associate Professor of Botany:  
Lecture before Sigma Xi on "The Effect of Solutions on Plant Growth," November 16.

Mr. Martin C. Flaherty, Assistant Professor of Forensics:  
Address before the Newman Club on "The Liturgical Beginnings of the Modern Drama," November 17.

Mr. Luther Burbank:  
Agricultural Club Lecture—"New Creations of Fruits and Flowers and how they were produced," November 18.

Dr. Thomas C. McKay, Instructor in Physics:  
Physics department lecture on "Emission of Negative Ions from Metals and Metallic Oxids at High Temperatures," November 20.

Dr. T. Brailsford Robertson, Assistant Professor of Physiology:  
Lecture before the Philosophical Union on "The Chemical Basis of Mental Phenomena," November 20.

Mr. Oliver M. Washburn, Instructor in Latin:  
Lecture on "Olympia and the Olympian Games," November 23.

Mr. Gustave Faucheux, Instructor in French:  
French department lecture, open to the public, on "French Character in Connection with Morals and Religion," November 24.

Brigadier-General Charles A. Woodruff, U. S. Army, retired:  
Illustrated lecture on the "Battle of Gettysburg," November 24.

Dr. Joseph H. Moore, Assistant Astronomer, Lick Observatory,  
Mount Hamilton, California:

Public lecture before the Astronomical Society of the Pacific  
on "Variable Stars," November 28.

Dr. S. D. Townley, of Stanford University:

Public lecture before the Astronomical Society of the Pacific  
on "Variation of Latitude," November 28.

Professor H. L. Wilson, of Johns Hopkins University:

Illustrated lecture under the auspices of the San Francisco  
branch of the Archaeological Institute of California, on  
"Recent Excavations in Rome," November 30.

Dr. George J. McChesney, of San Francisco:

Lectures to the seniors and juniors in Mining on "First Aid  
to the Injured," November 30.

Miss Lucy Sprague, Assistant Professor of English and Dean of  
Women:

Lecture in the series on contemporary social problems, open to  
the public, on "Standards of Taste," December 2.

Dr. William Frederick Badè, Professor of Old Testament Literature  
and Semitic Languages, Pacific Theological Seminary,  
Berkeley:

Public lecture before the Associated Electrical and Mechanical  
Engineers on "Work and Workers in the Canal Zone,"  
December 2.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "French  
Character from the Sociological point of view," December 3.

Dr. Thomas M. Putnam, Assistant Professor of Mathematics:

Lecture before the Kosmos Club on "Pragmatism and Common  
Sense," December 7.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "French  
Character from the Sociological point of view," December 8.

Mr. N. C. Nelson, Museum Assistant in the Department of  
Anthropology:

Lecture before Sigma Xi on "The Origin and Distribution of  
Shell Mounds in the San Francisco Bay Region," December 9.



Dr. John C. Merriam, Associate Professor of Palaeontology and Historical Geology:

Lecture before the Philosophical Union on "The Significance of the Biological History of Man," December 11.

SECOND HALF YEAR 1908-1909.

Mr. E. C. Mercer, of New York City:

Lecture to the men of the University on "College Grads on the Bowery," January 12.

Mr. E. C. Mercer, of New York City:

Lecture to the men of the University on "The Story of my own Life," January 15

Mr. Albin Putzker, Honourary Professor and Lecturer in German Literature:

Lecture before the Deutscher Verein on "Vor fünfunddreissig Jahren," January 18.

Mr. H. Morse Stephens, Professor of History and Director of University Extension:

Lecture in Political Science, open to the public, on "The Situation in the Balkans," January 19.

Mr. A. J. Heindl, of the Department of Palaeontology:

Lecture before the Russian Circle on "Life in a Siberian Mine," January 20.

Dr. Jacques Loeb, Professor of Physiology:

Lecture, in the series on contemporary social problems, on "The Physiological Basis of Altruism," January 20.

Dr. Pliny E. Goddard, Assistant Professor of Anthropology:

Lecture, Education 8, on "Education among the North American Indians," January 21.

Dr. J. H. Senger, Associate Professor of German:

Lecture before the College of Commerce, open to the public, on "The Great Electric Companies of Germany," January 25.

Mr. D. E. Smith, Lecturer in University Extension, and Instructor in History and Geography:

Political Science lecture, open to the public, on "Present Conditions in Spain," January 26.

Mr. Gustave Faucheux, Instructor in French:

French Department lecture, open to the public, on "A Crowned Saint: Louis IX (1214-1270)," January 26.

Dr. R. G. Boone, Lecturer in Education:

Lecture, Education 8, open to the public, on "The Schools as a Social Institution," January 26.

Dr. J. T. Allen, Assistant Professor of Greek:

Lecture before the Berkeley Art Association on "The Art of Prehistoric Greece," January 26.

Mr. Ernest P. Bicknell, National Field Agent, American National Red Cross:

Lecture in the series on contemporary social problems, open to the public, on "The Work of the American National Red Cross," January 27.

Dr. Pliny E. Goddard, Assistant Professor of Anthropology:

Lecture, Education 8, on "The Practice of Education among the California Indians," January 28.

Professor George Hempl, of Stanford University:

Public lecture on "The Etruscan, an Italian Dialect," January 28.

Dr. A. W. Gray, Instructor in Physics:

Physics Department lecture, open to the public, on "The Liquefaction of Helium," January 29.

Dr. David Starr Jordan, President of Leland Stanford Junior University:

Lecture before the Philosophical Union, open to the public, on "The Present Status of the Evolution Problem," January 29.

Mr. G. O. Shields, President of the League of American Sportsmen:

Lecture, open to the public, on "The Wild Animals of the Rocky Mountains," January 30.

Mr. T. E. Scotford, of the Pacific Railways Advertising Company:

Lecture before the College of Commerce, open to the public, on "Advertising as a Profession," February 1.

Dr. Edward B. Clapp, Professor of the Greek Language and Literature:

Political Science lecture, open to the public, on "Greece and Crete," February 2.

Rev. Charles R. Brown, of Oakland:

Old Testament lecture to the men of the University on "The Prolegomena," February 2.

Dr. R. G. Boone, Lecturer in Education:

Lecture, Education 8, open to the public, on "The Schools as a Social Institution," February 2.

- Mr. John Graham Brooks, President of the Consumers' League:  
Lecture in the series on contemporary social problems open to the public, on "The Consumers' League," February 3.
- Dr. A. W. Ryder, Assistant Professor of Sanskrit:  
Lecture, Education 8, on "Education in Ancient India," February 4.
- Mr. John Graham Brooks, President of the Consumers' League:  
Lecture before the College of Commerce, open to the public, on "An Instance of Prosperity," February 8.
- Dr. William E. Ritter, Professor of Zoology:  
Zoology lecture, open to the public, on "Description and Characterization of Local Birds," February 8.
- Dr. E. I. McCormac, Instructor in American History:  
Political Science lecture, open to the public, on "American Control of the Isthmian Canal," February 9.
- Rev. Charles R. Brown, of Oakland:  
Old Testament lecture to the men of the University on "The Patriarchal Period," February 9.
- Mr. Gustave Faucheux, Instructor in French:  
French Department lecture on "A Huguenot Leader: Agrippa d'Aubigné (1552-1630)," February 9.
- Dr. J. B. Peixotto, Assistant Professor of Sociology, on the Flood Foundation:  
Lecture in the series on contemporary social problems, open to the public, on "The Purchaser's Problem," February 10.
- Dr. William Popper, Assistant Professor of Semitic Languages:  
Lecture, Education 8, open to the public, on "The Education of the Hebrew Child," February 11.
- Mr. John Graham Brooks, President of the Consumers' League:  
Lecture, open to the public, on "Some Hopes for Better Politics," February 11.
- Mr. Frederick Slate, Professor of Physics:  
Lecture, Physics Department Meeting, on "Quantitative Test of Causal Connection," February 12.
- Dr. Albrecht Penck, Professor of Geography in the University of Berlin, and Kaiser Wilhelm Professor in Columbia University for 1908-09:  
LeConte Geology Club lecture, open to the public, on "Climatic Changes," February 15.

Mr. Lincoln Hutchinson, Assistant Professor of Commerce on the Flood Foundation:

College of Commerce lecture, open to the public, on "Ship Subsidies and Merchant Marine," February 15.

Mr. J. Grinnell, Director of the California Museum of Vertebrate Zoology:

Zoology lecture, open to the public, on "The Hawks and Owls of this Locality," February 15.

Mr. Oliver M. Washburn, Instructor in Latin:

Greek department lecture, open to the public, on "The Father of Gods and Men," February 15.

Mr. Ng Poon Chew, Editor Chung Sai Yat Po:

Political Science lecture, open to the public, on the "Political Outlook of China," February 16.

Rev. Charles R. Brown, of Oakland:

Old Testament lecture to the men of the University on "The Sojourn in Egypt," February 16.

Dr. Carl C. Plehn, Professor of Finance, on the Flood Foundation:

Lecture in the series on contemporary social problems, open to the public, on "The Nature and Application of Studies in the Cost of Living," February 17.

Dr. George S. Baker, of the United States Bureau of Animal Industry:

Agricultural Club lecture, open to the public, on "Production and Distribution of Sanitary Milk with special reference to Tuberculosis," February 17.

Dr. J. N. Bowman, Assistant Professor of Medieval History:

Political science lecture, open to the public, on "Mastery of the Pacific," February 23.

Rev. Charles R. Brown, of Oakland:

Old Testament lecture to the men of the University on "The Years of Wandering," February 23.

Dr. James T. Allen, Assistant Professor of Greek:

Greek Department lecture, open to the public, on "De Quincey and Greek Tragedy," February 23.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "The Real Cyrano de Bergerac, Poet and Bully (1619-1655)," February 23.



Mr. John Graham Brooks, President of the Consumers' League:

Lecture in the series on contemporary social problems, open to the public, on "Child Labor," February 24.

Mr. Joseph D. Redding, of New York:

Illustrated lecture, open to the public, on "The Battlefield of Alesia," February 24.

Mr. Julian Korski, University Fellow in Psychology:

Polish literature lecture, open to the public, on "Contemporary literary conditions in Russia, Germany, and Austrian Poland," February 25.

Dr. James T. Allen, Assistant Professor of Greek:

Lecture, Education 8, open to the public, on "Education of the Greek Boy," February 25.

Mr. O. M. Washburn, Instructor in Latin:

Lecture before the American Folk-lore Society, open to the public, on "Modern Greece: the Land and People," February 25.

Mirza Ali-Kuli Khan, Imperial Consul of Persia:

Public lecture on "The New Awakening in Persia and the Constitution," February 26.

Dr. P. E. Goddard, Assistant Professor of Anthropology:

Lecture before the Philosophical Union, open to the public, on "Lines of Social Ascent as Indicated by a Study of Primitive Mankind," February 27.

Mr. Lincoln Hutchinson, Assistant Professor of Commerce, on the Flood Foundation:

College of Commerce lecture, open to the public, on "Ship Subsidies and Merchant Marine," March 1.

Mr. J. Grinnell, Director of the California Museum of Vertebrate Zoology:

Zoology lecture, open to the public, on "The water-birds that we commonly see from the ferry-boats," March 1.

Dr. I. M. Linforth, Instructor in Greek:

Greek department lecture, open to the public, on "Modern Versions of Greek Myths," March 1.

Mr. Julian Korski, University Fellow in Psychology:

Polish Literature lecture, open to the public, on "The Sociological Novel in Poland: Boleslaw Prus," March 2.

Mr. T. H. Reed, Instructor in Political Science:

Political Science lecture, open to the public, on "M. Clemenceau and Parliamentary Government in France," March 2.

Rev. Charles R. Brown, of Oakland:

Old Testament lecture, open to the men of the University, on  
"The Days of the Judges," March 2.

Mr. C. G. Hyde, Associate Professor of Sanitary Engineering:

Illustrated public lecture before the Sigma Xi Society on  
"The relative safety of drinking water from various  
sources," March 2.

Mr. J. C. Astredo, Playground Commissioner of San Francisco:

Lecture in the series on contemporary social problems, open to  
the public, on "Juvenile delinquency in San Francisco,"  
March 3.

Dr. James T. Allen, Assistant Professor of Greek:

Lecture, Education 8, open to the public, on "Education of the  
Greek Boy," March 4.

Mr. W. J. Raymond, Associate Professor of Physics:

Physics Department lecture on "The Moving-coil Ballistic Gal-  
vanometer," March 5.

Dr. Wilfred T. Grenfell, of New York:

Lecture, open to the public, on "The Far North," March 5.

Mr. Lincoln Hutchinson, Assistant Professor of Commerce, on the  
Flood Foundation:

College of Commerce lecture, open to the public, on "Ship Sub-  
sidies and Merchant Marine," March 5.

Dr. William E. Ritter, Professor of Zoology:

Zoology lecture, open to the public, on "The beginning of the  
spring migration of birds," March 8.

Rev. Charles R. Brown, of Oakland:

Old Testament lecture, open to the men of the University, on  
"The Early Days of the Monarchy," March 8.

Dr. Edward B. Clapp, Professor of the Greek Language and  
Literature:

Illustrated lecture, open to the public, on "New Light on  
Greek Painting," March 8.

Dr. Orrin K. McMurray, Professor of Law:

Political science lecture, open to the public, on "Recent Ex-  
pansion of Executive Power," March 9.

Mr. Gustave Faucheux, Instructor in French:

French Department lecture, open to the public, on "An Aristo-  
cratic Woman of Letters: Madame de La Fayette (1634-  
1696)," March 9.

Mr. R. E. Mansell, Instructor in Horticulture, in charge of the agricultural grounds:

Lecture in the series on contemporary social problems, open to the public, on "Better Home Gardening," March 9.

Mr. L. J. Richardson, Associate Professor of Latin:

Lecture, Education 8, open to the public, on "The Roman Boy," March 11.

Mr. Jerome B. Landfield, formerly Lecturer in University Extension: Public lecture on "Russia in Evolution," March 11.

Mr. John Graham Brooks, President of the Consumers' League:

Lecture before the Economics Club on "Are we a Lawless People?" March 11.

Professor Julius Stieglitz, of the University of Chicago:

A course of ten lectures on The Theory of Ionization and Some of its Applications in Inorganic and Organic Chemistry. (Hitchcock Foundation):

February 24, "The van't Hoff Theory of Solution."

February 26, "The Theory of Ionization." (Second and third lecture.)

March 3, "The Precipitation of Salts."

March 5, "Complex Ions."

March 10, "The Electric Theory of Oxidation and Reduction." (Sixth and seventh lectures).

March 12, "Catalytic Actions." (Eighth, ninth, and tenth lectures).

Professor W. E. Dodd, of Randolph-Macon College. Series of lectures, open to the public, on the general subject:

"The Attempt of the South to Unite with the West for Imperial Purposes before the Civil War."

April 12, "Henry Clay."

April 13, "John C. Calhoun."

April 14, "Stephen A. Douglas."

Dr. Carl C. Plehn, Professor of Finance, on the Flood Foundation:

Lecture before the College of Commerce, open to the public, on "Tariff Reform," March 15.

Mr. J. Grinnell, Director of the California Museum of Vertebrate Zoology:

Zoology lecture, open to the public, on "The Common Mammals of Berkeley and Vicinity," March 15.

Dr. H. K. Schilling, Professor of the German Language and Literature:

Lecture before the Deutscher Verein on "Goethe und Schiller Stätten mit Lichtbildern," March 15.

Dr. H. W. Prescott, Associate Professor of Classical Philology:

Greek Department lecture, open to the public, on "The Significance of Hellenistic Poetry," March 15.

Mr. R. F. Scholz, Assistant Professor of Greek and Roman History:

Political Science lecture, open to the public, on "Internationalism," March 16.

Rev. C. R. Brown, of Oakland:

Old Testament lecture, open to the men of the University, on "The Kingdom under David," March 16.

Mr. F. E. Olmsted, Chief Inspector, United States Forest Service, San Francisco:

Lecture before the Agricultural Club, open to the public, on "The Work of the United States Forest Service in California," March 17.

Dr. J. H. Moore, Assistant Astronomer, Lick Observatory, Mount Hamilton, California:

Lecture, open to the public, on "Periodic Variable Stars," March 18.

Mr. L. J. Richardson, Associate Professor of Latin:

Lecture, Education 8, open to the public, on "The Roman Boy," March 18.

Dr. E. E. Hall, Assistant Professor of Physics:

Physics Department meeting: "Color Vision," March 18.

Dr. J. H. Moore, Assistant Astronomer, Lick Observatory, Mount Hamilton, California:

Lecture, open to the public, on "Periodic Variable Stars," March 20.

The Rt. Rev. R. L. Paddock, Bishop of Eastern Oregon:

St. John's Club Sermon, St. Mark's Church: "The Church and World Civilization," March 21.

Dr. H. B. Torrey, Associate Professor of Zoology:

Zoology lecture, open to the public, on "Aspects of the Marine Life of the Bay," March 22.

Dr. Carl C. Plehn, Professor of Finance, on the Flood Foundation:

College of Commerce lecture, open to the public, on "Tariff Reform," March 22.



Mr. R. F. Scholz, Assistant Professor of Greek and Roman History:

Greek department lecture, open to the public, on "A World Culture and a World Empire," March 22.

Mr. Julian Korski, University Fellow in Psychology:

Slavic department lecture, open to the public, on "The Social Development of Poland Since the Third Partition," March 24.

Mr. Sidney S. Peixotto, President of the Pacific Athletic Association:

Contemporary Social Problems lecture, open to the public, on "Boys' Clubs," March 24.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "An Eighteenth Century Reformer: Turgot (1727-1781)," March 24.

Dr. H. K. Schilling, Professor of the German Language and Literature:

Lecture, Education 8, open to the public, on "Germanic Education," March 24.

Dr. George E. Hale, Director of the Mount Wilson Solar Observatory:

Astronomy lecture, on "Solar Vortices and Magnetic Fields," March 27.

Mr. H. Morse Stephens, Professor of History and Director of University Extension:

College of Commerce lecture, open to the public, on "Four Historic Banks," March 29.

Mr. Joseph Grinnell, Director of the California Museum of Vertebrate Zoology:

Zoology lecture, open to the public, on "Common Mammals of the Bay Regions," March 29.

The Rt. Hon. James Bryce, His Britannic Majesty's Ambassador:

E. T. Earl course of lectures, open to the public, on "Ethics and Religion in Modern Life," March 29, March 31, and April 1.

Dr. R. G. Aitken, Astronomer at the Lick Observatory, Mount Hamilton, California:

Astronomy lecture, open to the public, on "Comments, with Special Reference to Comet Halley and Comet Morehouse," April 1.

Dr. H. K. Schilling, Professor of the German Language and Literature:

Lecture, Education 8, open to the public, on "Germanic Education," April 1.

Dr. T. C. McKay, Instructor in Physics:

Physics department lecture on "The Influence of Temperature on the Distribution of Energy in Continuous Spectra," April 2.

Dr. R. G. Aitken, Astronomer at the Lick Observatory, Mount Hamilton, California:

Astronomy lecture, open to the public, on "Visual and Spectroscopic Binary Stars," April 3.

Mr. A. C. Miller, Flood Professor of Political Economy and Commerce:

College of Commerce lecture, open to the public, on "Panic of 1907 in Retrospect," April 5.

Mr. Joseph Grinnell, Director of the California Museum of Vertebrate Zoology:

Zoology lecture, open to the public, on "Common Mammals of the Bay Region," April 5.

Rev. C. R. Brown, of Oakland:

Old Testament lecture, open to the men of the University, on "Prophets Before the Exile," April 6.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "A Typical French Scholar: Gaston Paris (1839-1903)," April 6.

Mr. John Graham Brooks, President of the Consumers' League.

Lecture before Newman Club, open to the public, on "Is the Country in Danger of Socialism?" April 6.

Dr. George R. Noyes, Assistant Professor of Slavic Languages:

Lecture, Education 8, open to the public, on "Education Among the Slavs," April 8.

Dr. William E. Ritter, Professor of Zoology:

Lecture, Zoology 19, open to the public, on "Something About California Reptiles," April 12.

Rev. C. R. Brown, of Oakland:

Old Testament lecture, open to the men of the University, on "The Exile and Return from Babylon," April 13.

Dr. E. B. Clapp, Professor of the Greek Language and Literature:

Lecture, open to the public, before the Newman Club, on "Greece and Turkey," April 13.

Professor A. T. Murray, of Stanford University:

Lecture before the St. John's Club, open to the public, on  
"Some Aspects of Greek Religion," April 13.

Mr. John Graham Brooks, President of the Consumers' League:

Lecture in the series on contemporary social problems, open to  
the public, on "New Ways of Dealing with the Liquor  
Problem," April 14.

Mr. Hamilton Holt, of the New York Independent:

Public lecture on Weinstock Foundation, on "Commercialism  
and Journalism," April 15.

Mr. E. A. Fath, Fellow of the Lick Observatory, Mount Hamilton,  
California:

Public lecture on "Spectra of Nebulae," April 17.

Mr. Joseph Grinnell, Director of the California Museum of Verte-  
brate Zoology:

Zoology lecture, open to the public, on "The Snakes and Tur-  
tles of California," April 19.

Professor T. J. J. See, Director of the U. S. Naval Observatory,  
Mare Island:

Modern Astronomy lecture, open to the public, on "The Origin  
of the Planetary System and of the Spiral Nebulae,"  
April 20.

Rev. C. R. Brown, of Oakland:

Old Testament lecture, open to the men of the University, on  
"The Priestly Law," April 20.

Mr. Gustave Faucheux, Instructor in French:

French department lecture, open to the public, on "A Great  
Scientist: Marcelin Berthelon (1827-1907)," April 20.

Professor Alexander G. McAdie, official in charge, U. S. Weather  
Bureau, San Francisco:

Modern Astronomy lecture, open to the public, on "Modern  
Sites for Observatories," April 22.

Dr. William E. Ritter, Professor of Zoology:

Lecture before the Philosophical Union, open to the public, on  
"Life from the Biologist's Standpoint," April 23.

Mr. J. Grinnell, Director of the California Museum of Vertebrate  
Zoology:

Zoology lecture, "The Snakes and Turtles of California,"  
April 26.

Dr. O. M. Washburn, Instructor in Latin:

Stereopticon lecture, open to the public, on "Pompeii: its De-  
struction and Remains," April 30.

Dr. G. W. Shaw, Associate Professor of Experimental Agronomy and Agricultural Technology, in charge of the Cereal Stations:

Public lecture on "Cereal Improvement in California," April 30.

Mr. M. E. Jaffa, Professor of Nutrition, in charge of the Poultry Station:

Public lecture on "Pure Food and the National and California Food Laws," May 10.

Dr. G. M. Stratton, Professor of Psychology:

Phi Beta Kappa annual address, open to the public, on "The Fighting Instinct," May 11.

Mr. W. B. Herms, Assistant Professor of Entomology:

Public lecture on "Insects in Their Relation to Public Health," May 14.

#### SUMMER SESSION, 1909.

Dr. E. L. Thorndyke, Professor of Psychology in Columbia University:

A lecture on "Darwin's Contribution to Psychology," June 21.

Mr. R. G. Aitken, Astronomer at the Lick Observatory, Mount Hamilton, California:

A lecture on "Telescopes and Stars," June 25.

Dr. Otto Jespersen, Professor of English Philology in the University of Copenhagen:

A lecture on the "Origin of Linguistic Species," July 2.

Dr. H. H. Horne, Professor of Philosophy in Dartmouth College:

A lecture on "The Historic Faith in Education," July 9.

Mr. F. M. Clapp, formerly Lecturer in University Extension:

A lecture on "The Art of Raphael," July 12.

Dr. W. C. Morgan, Assistant Professor of Chemistry:

A lecture on "Experiments with Liquid Air," July 15.

Mr. F. M. Clapp, formerly Lecturer in University Extension:

A lecture on "Michael Angelo, Poet, Sculptor, and Painter," July 19.

Mrs. Ellen Richards, Instructor in Sanitary Chemistry in the Massachusetts Institute of Technology:

A lecture on "The Social Significance of the Home Economics Movement," July 23.



Dr. D. T. MacDougal, Director of the Department of Botanical Research of the Carnegie Institution:

A lecture on "The Desert Botanical Laboratory of the Carnegie Institution of Washington," July 26.

Mr. William D. Armes, Associate Professor of English Literature:

An illustrated lecture on "The England of Shakspeare," July 26.

Mrs. Florence Kelley, National Secretary of the Consumers' League:

A lecture on "The Work of the Consumers' League," July 29.

#### FIRST HALF YEAR, 1909-10.

Mrs. Florence Kelley, Secretary of the National Consumers' League:

A public lecture on "The Student's Relation to Industry," August 17.

Dr. Frank Sewall, Washington, D. C.:

A public lecture on "The Relation of Swedenborg to Philosophy and Psychology," August 19.

Mr. C. G. Hyde, Professor of Sanitary Engineering:

A public lecture on "The Problem of Sanitation," August 24.

Dr. John Fryer, Agassiz Professor of Oriental Languages and Literatures:

A public lecture on "Educational Conditions in China," August 27.

Dr. E. B. Clapp, Professor of the Greek Language and Literature:

A public lecture, "Tale of Troy," August 27.

Mr. C. G. Hyde, Professor of Sanitary Engineering:

Public lecture on "The Problem of Sanitation," August 31.

Mr. Edwin Stephen Goodrich, Fellow of Merton College, Oxford, England:

A course of three lectures, open to the public, on "Morphology of the Excretory Organs," September 7, 8, and 10.

Mr. C. G. Hyde, Professor of Sanitary Engineering:

A public lecture on "The Control of Disease," September 8.

Mr. H. Morse Stephens, Professor of History and Director of University Extension:

Mining Association Lecture, open to the public, on "The Romance of the Life of the Engineer," September 13.

Dr. Adelaide Brown, of San Francisco:

A public lecture on "The Fight for Clean Milk in and About San Francisco," September 15.

Dr. Edward Hyatt, State Superintendent of Public Instruction:

A public lecture on "The Rural Schools of California," September 16.

Professor Augustus D. Waller, member of the Senate and Director of the Physiological Laboratory of the University of London.

Hitchcock lecture on "The Electrical Signs of Life. General Method of Investigation. The First Sign of Life. The Last Sign of Life. The Electrical Action of the Human Heart. The Normal Allo-rythmia of the Hearts of Canidae (dogs and wolves)," September 20.

Mr. Curtis Hillyer, of San Francisco:

A public lecture on "Municipal Warfare Against Disease," September 22.

Lieutenant R. B. Black, Engineer Corps, U. S. A.:

A public lecture on "Field Fortifications from the View of a Volunteer Infantry Officer," September 22.

Professor Augustus D. Waller, member of the Senate and Director of the Physiological Laboratory of the University of London.

Second Hitchcock lecture, open to the public, on "The Nervous System. The Electrical Response of Nerve, of Muscle, of the Retina, of the Brain. The Law of Sensation. The Sigmoid Curve. The Relation Between Energy Expended and Result Acquired," September 22.

Dr. J. W. McClymonds, Superintendent of Schools, Oakland, California:

A public lecture on "Some Problems of City School Administration," September 23.

Professor E. L. Hewett, Director of the American School of Archaeology:

A public lecture on "Three Excavations at Puyé," September 23.

Professor Augustus D. Waller, member of the Senate and Director of the Physiological Laboratory of the University of London.

Third Hitchcock lecture, open to the public, on "Alcohol, Ether and Chloroform. Vegetable Alkaloids. The Axiom of General Physiology, Its Application to Human Life," September 24.

Mr. George P. Adams, Assistant Professor of Philosophy:

Lecture before the Philosophical Union, open to the public, on  
"Some Conceptions of a Philosophy of Nature," September 24.

Professor Augustus D. Waller, member of the Senate and Director  
of the Physiological Laboratory of the University of London.

Fourth Hitchcock lecture, open to the public, on "Blaze Currents. The Retina, green leaves, the petals of a flower. The living skin of a dead man and of a dead cat. Our fish supply. The awakening of the dormant embryo. The blaze current of the egg and of the seed," September 27.

Miss Lucy B. Fisher, of San Francisco:

A public lecture on "How we are killing out Tuberculosis in San Francisco," September 29.

Professor Augustus D. Waller, member of the Senate and Director  
of the Physiological Laboratory of the University of London.

Fifth Hitchcock lecture, open to the public, on "Alcohol, Chloroform and Ether; their physiological equivalents. The price of anaesthesia. The lethal chamber in men and in animals. The chloroform balance," September 29.

Mr. C. L. McLane, Superintendent of Fresno City schools:

Public lecture on "School law and its influence on educational system," September 30.

Dr. Ernest B. Hoag, Acting Lecturer in Hygiene:

A public lecture on "School Health as an Index of Community Health," October 6.

Mr. F. F. Bunker, Superintendent of Berkeley Schools:

A public lecture on "The Elimination of Educational Waste," October 7.

Miss E. M. Kane, of San Francisco:

A public lecture on "What a District Nurse sees and does," October 13.

Mr. G. L. Sackett, Secretary State Text-Book Committee:

A public lecture on "State Text-Books and Allied Problems," October 14.

Mr. Hiram Johnson, '88, of San Francisco:

League of the Republic lecture, open to the public, on "Conclusions from personal experiences," October 14.

Mr. E. S. Bloom, General Superintendent of the Pacific States Telephone and Telegraph Company's plants:

An illustrated public lecture under the auspices of the Associated Electrical and Mechanical, and Civil Engineering Associations on "The Telephone Plant," October 20.

Mr. P. W. Kauffman, Supervising Principal of Pomona Schools:

A public lecture on "The School and the Public Library," October 21.

Mr. John G. Howard, Professor of Architecture and Supervising Architect of the University:

A public lecture on "The Relation of the House to Social Betterment," October 27.

Dr. John Fryer, Agassiz Professor of Oriental Languages and Literatures:

A public lecture on "The Provinces of Hupeh and Hunan," October 29.

Dr. Charles H. Rieber, Associate Professor of Logic, on the Mills Foundation:

A public lecture before the Philosophical Union on "The Theory of Scientific Method," October 29.

Mr. John G. Howard, Professor of Architecture and Supervising Architect of the University:

A public lecture on "The Relation of the House to Social Betterment," November 3.

Mr. M. E. Cox, Principal San Rafael High School:

A public lecture on "Teachers' Associations and their Significance," November 4.

Mr. J. C. Love, Auditor of the Pacific Gas and Electric Company:

A public lecture on "Field Reports of Engineers," November 4.

Professor Albin Putzker, Honourary Professor and Lecturer in German Literature:

A public lecture in commemoration of the 150th anniversary of the birth of Friedrich Schiller, November 10.

Dr. John Fryer, Agassiz Professor of Oriental Languages and Literatures:

A public lecture on "The Ports in the Yangtsze River," November 12.

Mr. J. H. Templeton, Principal of the Palo Alto High School:

A public lecture on "A more efficient state school system," November 18.



Dr. Warner Brown, Instructor in Psychology:

A public lecture before the Philosophical Union on "Philosophy and the Concept of Evolution: The Genetic Sciences," November 19.

Hon. Charles S. Wheeler, '84, former Regent of the University:

A public lecture before the Law Association on "Blackstone, the Lawyer and the Man," November 30.

Dr. John N. Force, of San Francisco:

A public lecture on "The New Profession, a Doctor of Public Health," December 1.

Professor E. P. Cubberley, Professor of Education, Leland Stanford Junior University:

A public lecture on "The Problem of Supervision, with special Reference to the Selection of Superintendents," December 2.

Dr. DeWitt H. Parker, Instructor in Philosophy:

A public lecture before the Philosophical Union on "Philosophy and the Concept of Life: The Biological Sciences," December 10.

#### SECOND HALF YEAR, 1909-1910.

Baron Kikuchi, President of the Kyoto Imperial University, and Ex-Minister of Education of Japan:

Special lecture, open to the public, on "Education in Japan," January 11.

Rev. Joseph W. Cochran, Corresponding Secretary of the Board of Education of the Presbyterian Church:

A public lecture on "Tests of Leadership," January 24.

A public lecture on "Tasks of Leaders," January 25.

Mr. Chester H. Rowell, Editor of the Fresno Republican:

A public lecture on "The University Man in Public Life," January 26.

Mr. L. B. Avery, Principal of the San Jose High School:

A public lecture on "High School Architecture," January 27.

Mr. H. A. Overstreet, Associate Professor of Philosophy:

A public lecture before the Philosophical Union on "Philosophy and the Concept of Mechanism: The Physical Sciences," January 28.

M. Camille Enlart, Director of the Trocadero Museum of Comparative Sculpture in Paris:

A public illustrated lecture on "La Ville au Moyen Age, Travaux et Edifices Publics, VIe-XVIIe siecles," January 29.

Mr. J. Z. White, of Chicago:

League of the Republic lecture, open to the public, on "Direct Legislation through the Initiative, Referendum and Recall," February 1.

Professor E. S. Evenden, Department of Education in Stanford University:

Public lecture on "Present Tendencies in the Curricula of California High Schools," February 3.

Mr. C. W. Hornick, of the San Francisco Call:

A public lecture on "Advertising," February 8.

Mr. O. A. Johnson, Principal of the San Mateo High School:

A public lecture on the Schools of California: "Community Needs and Choice of Studies," February 10.

Mr. William L. Finley, '03, Lecturer and Field Agent of the National Association of Audubon Societies:

A stereopticon lecture, open to the public, on "A Cruise of two Camera Hunters in Pursuit of Birds," February 12.

Mr. J. F. Engle, Principal of the Auburn High School:

A public lecture on "Moral and Social Aspects of High School Life," February 17.

Dr. Leroy Anderson, Professor of Agricultural Practice and Superintendent of University Farm Schools:

A public lecture on "The High School and Rural Problems," February 24.

Dr. Morton Prince, Lecturer on Abnormal Psychology:

Lecture before the Philosophical Union on "Philosophy and the Conception of Consciousness: The Psychological Sciences," February 25.

Mr. Isador Jacobs, President of the California Canneries Company:

Lecture before League of the Republic on "The Public Welfare Fund of San Francisco," March 2.

Mr. J. F. Smith, Principal of the Campbell High School:

A public lecture on "The Development of the Individual High School Pupil," March 3.

Mr. J. H. Francis, Principal of the Los Angeles Polytechnic High School:

A public lecture on "Government in High Schools," March 10.

Mr. J. F. Engle, Principal of the Auburn High School:

A public lecture on "Moral and Social Aspects of High School Life," March 17.

Professor Henry Fairfield Osborn, President of the American Museum of Natural History of New York City:

An illustrated public lecture on "Dinosaur Hunting in Montana," March 17.

Dr. W. W. Campbell, Director of the Lick Observatory, Mount Hamilton, California:

Lick Astronomical lecture, open to the public, on "Stellar Motions," March 21.

Dr. R. G. Aitken, Astronomer at the Lick Observatory, Mount Hamilton, California:

Lick Astronomical lecture, open to the public, on "The Planets," March 28 and March 30.

Professor M. Carroll, of the George Washington University:

Lecture under the auspices of the Archaeological Institute of America, open to the public, on "Activities and Excavations of the Archaeological Institute and the Schools," March 29.

Dr. Elmer E. Hall, Assistant Professor of Physics:

A public lecture on "The Mechanics of Flight," April 1.

Dr. George M. Stratton, Professor of Psychology:

Lecture before the Philosophical Union, open to the public, on "Philosophy and the World of Ideals: Aesthetics," April 1.

Right Rev. William F. Nichols, Bishop of California:

St. John's Club lecture, open to the public, on "For the Good of the Service," April 5.

Mr. W. H. Mackay, Principal of the Chico High School:

A public lecture on "The Six-Year High School," April 14.

Mr. J. O'Connor, Principal of the Mission High School, San Francisco:

A public lecture on "The High School and Civic Duty," April 21.

Mr. W. J. Raymond, Associate Professor of Physics:

A public lecture on "Electrical Devices for Evaluating formulae and solving algebraic equations," April 22.

Dr. Henry W. Stuart, Professor of Philosophy in Leland Stanford Junior University:

Lecture before the Philosophical Union, open to the public, on "Philosophy and the World of Ideals: Ethics and Religion," April 29.

## SUNDAY AFTERNOON HALF-HOURS OF MUSIC IN THE GREEK THEATRE

(OPEN TO THE PUBLIC.)

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1908.

- August 23—Mr. J. F. Veaco, tenor, with Miss Susan Waterman, accompanist.
- August 30—Miss Frances H. Wilson, '10, pianist.
- September 6—Mlle. Westerlind, contralto.
- September 13—Mr. Charles P. Hildesley, with Mrs. L. J. Murdoch, accompanist.
- September 20—Miss Clara A. J. Freuler, soprano, with Miss Susan Waterman, accompanist.
- September 27—Miss Gussie Mast, soprano, with Miss Edith M. Allen, '00, accompanist.
- October 4—Misses Carrie M. Bright and Sydney Miller and Messrs. Marinus L. Lytjen and Charles H. Blank, of the Stewart Violin School, with Miss Mildred Porter, pianist, and Mr. Alexander Stewart, director; and a vocal trio, Miss Edith Hibberd, Mrs. E. W. Florence, and Miss Marion Morrow, pupils of Mrs. Grace Davis Northrup.
- October 11—Misses Doris Schnabel, soprano, and Helen Balch, contralto, with Miss Sue Chamberlain, accompanist.
- October 18—Miss Irene Palmer, pianist.
- October 25—The Fifth Regiment Band, in an orchestral concert.
- November 1—Miss Lue Barbagelata, violinist, and Miss Ella Atkinson, soprano, with Mrs. Robert M. Hughes, accompanist.
- November 8—The Treble Clef Club: Mrs. Frank McGowan, president, Mr. Paul Steindorff, director, Mrs. Estelle Drummond Swift, accompanist, Miss Elizabeth Dolan, violinist.



- November 15—The University of California Cadet Band, Capt. D. R. Crane, leader, and Mr. Fred Butler, basso.
- November 22—Mme. Marga Biengke, soprano, with Mr. Fred Maurer, accompanist.
- November 29—Mr. Ninian B. Yuille, tenor, with Miss Elizabeth Simpson, accompanist.
- December 6—Miss Elsie Arden, contralto, with Miss Helen Livingstone, accompanist. (This concert was not given owing to the illness of Miss Arden.)
- December 13—Mrs. Richard Rees, contralto, assisted by Misses Elna Miller and Frieda Bamburger.

## 1909.

- March 7—Miss Gertrude Belle Tryone, soprano, with Miss Doris Ward Beechwood, accompanist, and Miss Alice Davies, violinist.
- March 14—The Girls' Glee Club of the Lowell High School, San Francisco, under the direction of Mr. H. B. Pasmore, and assisted by Mr. Thomas W. Pearson, basso.
- March 21—Miss Edith Mote Smith, soprano, with Mr. Warren D. Allen, accompanist. (This concert was postponed to April 4.)
- March 28—Miss Phyllida Ashley, pianist.
- April 4—Miss Edith Mote Smith, soprano, and Mr. Warren D. Allen, accompanist.
- April 11—The De Koven Club and the University of California Glee Club, under the direction of Mr. Clinton R. Morse, '96.
- April 18—Mrs. Richard Rees, contralto, with Mr. Roscoe Warren Lucy, accompanist.
- April 25—The Treble Clef Society, under the direction of Mr. Paul Steindorff.
- May 2—Miss Ethel Preble, mezzo-soprano, and Miss Doris Schnabel, soprano, with Miss Sue Chamberlain, accompanist.
- May 9—The Stewart Orchestral Club, with Mr. Alexander Stewart, director.
- June 20—Mr. R. H. Thomas, baritone, and Mr. Vincent de Arrillaga, pianist.

- June 27—Miss Isabelle Wineroth, vocalist.
- July 4—The Fifth Regiment Infantry Band, National Guard of California, with Mr. George W. Hollister, bandmaster.
- July 11—Mr. C. Patrick Hildesley, tenor, with Mrs. L. J. Murdoch, accompanist.
- July 18—Mr. Jack E. Hillman, baritone, with Miss Alva Haight, accompanist.
- July 25—Miss Edna Cadwalader, violinist, Miss Edith Ladd, pianist, and Mr. Osborne Wilson, 'cellist.
- September 5—Miss May Fitzgerald, '10, pianist.
- September 12—Miss Anil Deer, vocalist, with Mr. Charles H. Reed, accompanist.
- September 19—Miss Elsa Thornsvarð, soprano, with Miss Augusta Gillespie, accompanist.
- September 26—Miss Edna Riely, soprano, Miss Amelia Laviosa, soprano, Miss Lucy M. Van de Mark, contralto, Mr. Thomas Walker, baritone, with Mr. John Hartigan, accompanist, of the Romeo Frick Studio, Oakland.
- October 3—Mrs. James M. Pierce, soprano, with Mr. Frederick Maurer, Jr., accompanist. (The concert was not held owing to the inclemency of the weather.)
- October 9—Miss Helen Shields, contralto, with Mr. Frederick Maurer, Jr., accompanist.
- October 17—Mrs. Frances Thoroughman, soprano, with Mr. Frederick Maurer, Jr., accompanist.
- October 24—Mr. Carlo Gentile, pianist.
- October 31—The Alta Quartette: Miss Evelyn Barnes, Miss Virginia G. Cleary, Mrs. Isabella A. Andrews, and Mrs. James H. Kelly, with Mrs. Edward Gowan, accompanist.
- November 7—Miss Florence Drake LeRoy, soprano, with Mr. M. I. Meyers, accompanist.
- November 14—Miss Ida von Weick, mezzo-soprano, and Mr. Charles E. Lloyd, baritone, with Mrs. Willard Batchelder, accompanist.

- November 21—The Girls' Glee Club of the Lowell High School, Francisco (Mr. H. B. Pasmore, director), assisted by Mr. Thomas P. Nowlan, tenor, and Miss Harriet Pasmore, accompanist. (The concert was not held.)
- November 28—Mrs. Evelyn Henry Stoppani, soprano, with Miss Mary Henry, accompanist.
- December 5—Mr. Arnold von der Aue, formerly Wagnerian tenor of the Savage Grand Opera Company, with Mr. Frederick Maurer, Jr., accompanist. (This concert was not held.)

1910.

- February 13—Mrs. E. G. Kendall, soprano, Miss Agatha Turner, violinist, with Mrs. S. L. Turner accompanist.
- February 20—The combined bands of the Fifth Regiment, N.G.C., and the Naval Militia of California (George W. Hollister, bandmaster).
- February 27—No concert.
- March 6—Mme. von Meyerinck, presenting Miss Ada Armstrong, Miss Edith Lloyd, Mrs. M. Lueders, Mr. Frantz Irving, Miss Lillian Lineer, Miss Louise Lund, Miss Sadie Ward, Mr. Herbert von Meyerinck, and Mr. Rudolph C. Post.
- March 13—Mme. Aurora Thompson, pianist, and Miss Ethel L. Preble, mezzo-soprano, with Miss Sue Chamberlin, accompanist. (Short address by Mr. Andrew Carnegie.)
- March 20—No concert.
- March 27—The Treble Clef Club of San Francisco, Mrs. Fanny C. Smith, president, Mr. Paul Steindorff, director, with Mr. William Goodrum, Jr., accompanist.
- April 3—Miss Alda McBride, soprano, Mrs. C. H. Kirby, mezzo-soprano, Miss Elizabeth Banta, contralto, Mr. Walter Chauncey Campbell, basso, Miss Mignonette Reed, soprano; Mrs. H. D. Holt, contralto, Miss Beth Milliken, violinist, with Mrs. Gladys Downs Creighton, accompanist, presented by Mrs. Marriner-Campbell.

- April 10—Mr. Benjamin A. MacComsey, violinist, with Mr. S. Maxwell Sypher, accompanist, and Mr. Joseph J. Rosborough, baritone, with Mr. Harris C. Allen, accompanist. (This concert was not given on account of inclement weather.)
- April 17—Miss Blanche Lillian Kaplan, pianist.
- April 24—Miss Doris Schnabel, soprano, with Miss Sue Chamberlin, accompanist.
- May 1—The University Cadet Band, Captain William D. Mainland, leader.
- May 8—The Steindorff Trio, with solos by Mrs. Harry G. Knowles, mezzo-soprano, and Miss Mary Coogan, soprano.
- June 26—The Fifth Regiment Band, N. G. C. (Mr. George W. Hollister, bandmaster).



DEATHS OF MEMBERS OF THE UNIVERSITY

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Gano Westervelt Chittenden, of the class of 1912, College of Civil Engineering, November 7, 1908.

Luis Lane Dunbar, Professor Emeritus of Operative Dentistry and Dental Pathology, December 30, 1908.

Otto Hermann Lee, of the class of 1910, College of Social Sciences, January 20, 1909.

Joseph Banning Cline, of the class of 1912, College of Agriculture, February 10, 1909.

Irving Stringham, Professor of Mathematics, October 5, 1909.

William Martin Searby, Professor of Pharmacy and Director of the Pharmaceutical Laboratory, October 7, 1909.

Thomas J. Kirk, formerly, as State Superintendent of Public Instruction, a Regent of the University, October 28, 1909.

William E. Luck, of the class of 1910, College of Mining, January 8, 1910.

Harold Burr Millis, of the class of 1911, College of Mining, January 12, 1910.

Willard Bradley Rising, Professor of Chemistry, February 9, 1910.

Camillus Bush, Instructor in Surgery, May 28, 1910.

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**Allen, J. T.**, Associate Professor of Greek.

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**Alderson, H. E.**, Assistant in Diseases of the Skin.

The Skin Reaction After the Use of Tuberculin Ointment. (Cal. State Jour. Med., vol. 7, no. 1, pp. 3-9; Jan., 1909.)

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**Allen, W. F.**, Collector and Assistant Herzstein Laboratory, New Monterey.

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**Alvarez, A. C.**, Instructor in Civil Engineering.

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**Babcock, E. B.**, Assistant Professor of Agricultural Education.

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**Barrows, D. P.**, Professor of Education.

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**Smithson, G. A.**, Instructor in English Philology.

How Is It Now? (Cal. Occident, vol. 57, no. 1; Sept., 1909.)

**Soulé, F.**, Professor Emeritus of Civil Engineering.

Concrete's Conquest, a Retrospect. (Cal. Jour. Tech.; May, 1910.)

**Spalding, A. B.,** Professor of Obstetrics.

- Report of the Medical Director. (San Francisco Maternity Fifth Annual Report, pp. 18-22; Jan., 1909.)
- Milk Commission of the San Francisco County Medical Society. (Cal. State Jour. Med., vol. 7, no. 4, pp. 136-142; Apr., 1909.)
- Hypertrophic Pyloric Stenosis with Autopsy Findings. (Ibid., no. 8, pp. 282-285; Aug., 1909.)
- The Feeding of Immature and Atrophic Infants. (Jour. Am. Med. Ass'n, vol. 53, no. 13, pp. 998-1001; Sept. 25, 1909.)
- Report of the Medical Director. (San Francisco Maternity Sixth Annual Report, pp. 16-21; 1910.)
- Cesarean Section with Report of Nine Cases. (Cal. State Jour. Med., vol. 8, no. 2, Feb., 1910.)

**Stratton, G. M.,** Professor of Psychology.

- The Color Sense and Block Signals by Direction. (International Jour. Surgery; reprinted in "Symposium", Pub. by New York and New England Ass'n of Railway Surgeons; 1909.)
- The Illusory Undulation and Shimmer of Straight Lines. (Johns Hopkins Studies in Philosophy and Psychology, vol. 1, no. 2, pp. 63-84; Psychol. Rev. Monogr. Suppl., vol. 10; Feb., 1909.)
- Some Experiments on the Perception of the Movement, Color, and Direction of Lights, with Special Reference to Railway Signaling. (Ibid., pp. 85-104.)
- Toward the Correction of Some Rival Methods in Psychology: President's Address. (Psychological Review, vol. 16, no. 2, pp. 67-84; Mar. 1, 1909.)
- The Localization of Diasclerotic Light. (Ibid., vol. 17, no. 4, pp. 294-300; July 1, 1910.)

**Tait, D.,** Director Laboratories of Experimental Research.

- Medical Education. [Report to Council Am. Medical Ass'n.] (Jour. Am. Med. Ass'n, vol. 50, p. 1837; 1908.)
- Electric Sleep. [In collaboration with Dr. Raymond Russ.] (Ibid., vol. 53, p. 1611; 1909.)

**Thomas, W. S.,** Assistant Professor of Education and Examiner of Schools.

- The High School: What, Whence, Whither? (Sierra Educational News and Book Rev., vol. 5, no. 6, June, 1909; also in Palo Alto Daily Times, Mar. 28, 1909.)
- A Plea for Suburban Life. (Berkeley Daily Gazette; Dec. 8, 1909.)

**Torrey, H. B.**, Associate Professor of Zoology.

The Leptomedusae of the San Diego Region. (U. C. Publ. Zoology, vol. 6, no. 2, pp. 11-31, 11 text figures; Feb., 1909.)

Three Species of Cerianthus from Southern California. [With F. L. Kleeberger.] (Ibid., no. 5, pp. 115-125, 4 text figures; 1909.)

Differentiation in Hydroid Colonies. II Aglaophenia. (Biological Bull., vol. 18, no. 3, pp. 138-54, 6 figures, 12 tables; Feb., 1910.)

Aspects of Regeneration in Corymorpha. (Proc. Seventh International Congress Zoology, Boston, 1907, 2 pp.; 1910.)

**Tufts, J. B.**, Professor of Dental Pathology and Therapeutics.

Notes on Dental Pathology and Therapeutics. (Text Book for Dental Students; Oct., 1909.)

**Ward, A. R.**, Assistant Professor of Bacteriology and Director of the State Hygienic Laboratory.

Pure Milk and the Public Health. A Manual of Milk and Dairy Inspection. (Taylor & Carpenter, Ithaca, New York; 1909.)

**Washburn, O. M.**, Assistant Professor of Classical Archaeology.

The Charioteer of Amphion at Delphi. (Am. Jour. of Archaeology, vol. 12, no. 2, pp. 198-208; 1908.)

Tucker's "Life in Ancient Athens." [Review.] (Classical Philology, vol. 4, no. 3, pp. 342-344; 1909.)

**Wheeler, B. I.**, President of the University.

Learning and the Republic: address before the Union League Club, Chicago, Feb. 22, 1908; Nebraska State Teachers' Ass'n, Lincoln, Nov. 6, 1908, and Southern Cal. Teachers' Ass'n, Los Angeles, Dec. 21-24, 1908. (Addresses and Proc. Sixteenth Annual Session Southern Cal. Teachers' Ass'n, p. 27; Dec., 1908.)

Recent Adjustments of the College Course. (Publ. Ass'n Collegiate Alumnae, series 3, no. 18; Dec., 1908.)

The Progress of the University. (Berkeley Reporter, Christmas no.; 1908.)

The Greek Lyric: being an introduction to Dr. Ivy Kellerman's "Greek Lyrics." (Mar. 1, 1909.)

Travel and Education. (San Francisco Examiner; Mar. 3, 1909.)

- Conservation. (Conservation of Resources in Cal., edited by Edward Hyatt, p. 11; Apr., 1909.)
- Rebuilding San Francisco. (Sunset Mag., vol. 22, no. 4; Apr., 1909.)
- Commencement Address: delivered in the Greek Theatre, May 12, 1909. (University Chronicle, vol. 11, no. 3; July, 1909.)
- Education a Larger Qualification. (Labor Clarion, p. 21; Sept. 3, 1909.)
- Individual Responsibility of Officials. (Am. City, vol. 1, no. 1, p. 26; Sept., 1909.)
- Erziehung zur Persönlichkeit in Amerika. (Berliner Freistudentische Blätter, 2. Jahrg., nos. 15, s. 169, u. 16, s. 175; 9 u. 16; Dez., 1909.)
- Message to the Japanese Students. (Berkeley Lyceum, 1909.)
- Die Bedeutung des Professoren-Austausches. (Deutsche Rundschau, 36. Jahrg., heft 5, s. 11; Feb., 1910.)
- Charakterzüge des Amerikanischen Volkes. (Internationale Wochenschrift für Wissenschaft Kunst und Technik, s. 2, 12 März, 1910.)
- Amerikanische Erziehungsprobleme. (Die Woche, 12. Jahrg, no. 12, s. 469; 19 März, 1910.)
- Address at the Annual Dinner of the Berkeley Chamber of Commerce: delivered July 27, 1909. (University Chronicle, vol. 12, no. 2, p. 188; Apr., 1910.)
- Commencement Address: delivered in the Greek Theatre, May 18, 1910. (Ibid., no. 3, p. 223; July, 1910.)
- President Porfirio Diaz: a letter pub. in José F. Godoy's "Biography of President Diaz." (Biography of President Diaz, p. 190; G. P. Putnam's Sons; 1910.)
- Unterricht und Demokratie in Amerika: Vorlesungen gehalten an der Berliner Universität. (Verlag von Karl J. Trübner, Strassburg; 1910.)

**Whitney, A. W.**, Assistant Professor of Mathematics and Insurance Methods.

The Actuarial Theory of Fire Insurance Rates as Depending Upon the Ratio of Insurance to Sound Value, Hence a Determination of the Rates for Use with a Coinsurance Clause. (Sixth Internat. Kongress, F. Versich.—Wissenschaft, Vienna, bd. 11, s. 395; 1909.)



**Wiley, H. R.**, Special Lecturer in Jurisprudence.

In the Season of Poppies. (Overland Monthly, San Francisco, p. 262; Sept., 1908.)

The Bells of Yule. (Sunset Mag., San Francisco; Dec., 1909.)

The Desert. (Pacific Monthly, Portland, Ore., p. 100; Jan., 1910.)

**Wright, W. H.**, Astronomer in the Lick Observatory.

Two Stars Having Variable Radial Velocities. (L. O. B., vol. 5, p. 61; Oct., 1908.)

Note on the Spectrum of Halley's Comet. (Ibid., p. 146; Oct., 1909.)

Six Southern Stars Having Variable Radial Velocities. (Ibid., p. 176; Dec., 1909.)

Spectroscopic Observations of Comet *a*, 1910. (Ibid., p. 179; Feb., 1910.)

**Wyneken, F. A.**, Assistant in German.

Die Verhexten Pesos. (Hamburger Fremdenblatt, no. 98, p. 21; Apr. 28, 1909.)

Fraulein Captain. (Der Deutsche, Berlin, vol. 8, no. 21, p. 671; Aug. 22, 1909.)

Auf der Orangenfarm. (Hamburger Fremdenblatt, no. 196, p. 17; Aug. 22, 1909.)

Irene Casey, Amerikanische Tragikomoedie. (Ibid., no. 7, p. 37; Jan. 9, 1910.)

Sally's Geheimniss. (Fliegende Blaetter, Munich, vol. 132, no. 3387, p. 316; June 28, 1910.)

#### ABBREVIATIONS.

Abbreviations used in the above bibliography for periodicals, societies, etc.: A. S. P. (Astronomical Society of the Pacific); Cal. Jour. Tech. (California Journal of Technology); Jour. Am. Med. Ass'n (Journal of the American Medical Association); L. O. B. (Lick Observatory Bulletin); Nat. Acad. Sci. (National Academy of Science); Pac. Rural Press (Pacific Rural Press); Proc. N. E. A. (Proceedings of the National Education Association); U. C. Agr. Exp. Sta. (University of California Agricultural Experiment Station); U. C. Publ. (University of California Publications).

Abbreviations of single words: Acad. (Academy); Am. (American); Ass'n (Association); Bull. (Bulletin); Bur. (Bureau); Cal. (California); Chem. (Chemical); Cir. (Circular); Con. (Convention); Jour. (Journal); Mag. (Magazine); Med. (Medicine); Nat. (National); n.s. (new series); Pac. (Pacific); Proc. (Proceedings); Pub. (Published); Publ. (Publication); Rep. (Report); Rev. (Review); Soc. (Society); Trans. (Transactions); U. S. (United States).

## GIFTS TO THE UNIVERSITY: GENERAL LIST\*

- Alexander, Miss Annie M., \$7,000 toward the cost of the erection of the California Museum of Vertebrate Zoology; \$1,500 to \$2,000, being the cost of an expedition to Northwestern Nevada for the study of the extinct mammalian faunas of that region and to secure collections which have been placed in the University Museum.
- Alumnae of Miss Lake's School, through Mrs. Milton H. Esberg of San Francisco, \$665, to be known as the "Mary Lake Memorial Fund" for the purchase of recent English literature.
- American Academy of Arts and Sciences, \$250 for the purchase of a Hartman Photometer, to remain the property of the Academy, but in the possession of the Lick Observatory while they have present or prospective need of it.
- Andrus, Mrs. Milton, Berkeley, two photographs of the Castello di S. Angelo and the Colosseum.
- Bard, Regent Thomas R., \$1,000 for the Academy of Pacific Coast History.
- Belcher, Robert, '00, \$50 as a gift to the Robert Belcher Library Fund.
- Board of Fire Underwriters of the Pacific, an offer to regard the Affiliated Colleges buildings as part of the University buildings to be inspected by the Board.
- Brayton, Miss Louise Ely, a carved frame and illuminated text, in memory of Reverend Isaac Brayton, the work of Point Loma students in arts and crafts.
- Bush, Richard J., a volume entitled "The Esquimaux," edited by J. J. Harrington, published in manuscript at Port Clarence, Alaska, from October 14, 1866, to September 1, 1867, and actually printed from type in San Francisco after publication, probably the first Alaskan newspaper in English.

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\* For further detail on these gifts see the Reports of the Secretary of the Regents for the years ending June 30, 1909, and June 30, 1910.

Carr, W. K., of Washington, D.C., fifteen lantern slides showing the curves corresponding to various musical intervals.

Chamberlain, Joseph P., \$2,000 toward the erection of the Boalt Hall of Law.

Class of 1908, \$200, being the class fund, the income to be available for this alumni class organization; unused interest to be added to the principal; and the principal eventually to revert to the University.

Class of 1909 Loan Fund, \$600 with accumulated interest to revert to the Regents when the class no longer needs the income thereof; and \$1,050.80 to be available immediately as a loan fund for juniors and seniors.

Class of 1910, \$1,350, of which \$1,000 is to be held in trust and unimpaired, the income to be paid to the class secretary, until the death of the last alumni member of the class, when it may be used as the Regents desire, the remaining \$350 to be available on note of the class for improvement or decoration of the university campus, or buildings, or for the erection of a memorial; and \$1,000 for the erection of a stone bridge over Strawberry Creek near the Faculty Club.

Congregation Emanu-El of San Francisco, \$100 to be devoted to the support of the American School of Archaeology at Jerusalem.

Cook, Professor Albert S., \$1,000 as endowment for the "Emily Chamberlain Cook Prize in Poetry," to be awarded (as a general rule annually) to a student of the University.

Corbet, Burke, \$50 for the laboratory of experimental surgery at the University Hospital.

Davenport, Mrs. Elizabeth H., sixty-nine valuable documents representing old South Carolina life and institutions.

Deere Implement Company of San Francisco, a "Champion Fanning Mill," for the Tulare Experiment Station.

Faculty of the Los Angeles Medical Department, \$2,800 as contribution toward the running expenses of the department.

Fowler, Mrs. E. M., of Pasadena, \$150 toward the expense of the collection of material for instruction and research in the zoological laboratory in embryology, parasitology, and protozoology.

Friend of the University, \$500 for the purchase of books in philosophy and belles lettres.

Ginn, Edwin, of Boston, and Mrs. Josephine E. P., of Ventura, executors of the will of the late Frederick B. Ginn, a subscription equal to the amount of the Massachusetts inheritance tax on the Ginn bequest to the Lick School and the Wilmerding School.

Ginn, Frederick B., \$20,000 bequest for the benefit of orphan boys in attendance at the Lick School or the Wilmerding School.

Graves, Jackson A., \$20,000 for the benefit of the Los Angeles Medical Department of the University of California. In commemoration of this gift, the dispensary of the Los Angeles Medical Department is known as "The Selwyn Emmett Graves Memorial Dispensary," in memory of the son of Mr. Graves, at the time of his death a senior in medicine at Los Angeles.

Hamerslag, A., \$6,000, bequeathed to the University as an endowment for the "Hamerslag Loan Fund" for the benefit of students, preferably those in scientific courses.

Hearst, Mrs. Phoebe A., 145 mounted photographs, dating back to the early days of California and Nevada, of mining scenes, the work of Watkins, the pioneer photographer of California; 27 photographs of the concentrating mill and furnace room of the Anaconda Mine in Montana; \$2,400 for the Phoebe Hearst Scholarships for the year ending June 30, 1909; a collection of antique laces, fans, china, glass, pewter and silver, and of old fabrics, costumes, church robes, rugs, kakemonos, miniatures, snuff boxes, bronzes, spinning wheels, and Indian baskets, for the future museum of the University; three packages of shells for the Zoological Museum; \$1,780 as a contribution toward the maintenance of the anthropological collections at the Affiliated Colleges; \$878.45 as a donation toward the cost of the dressing rooms at the Greek Theatre.

Herzstein, Dr. Morris, \$500 for the Herzstein Lectures for the year 1908.

Howison, Professor George H., portraits, photographs, and a cabinet clock for the department of Philosophy.

Huntington, Archer M., president of the Hispanic Society of America, a complete set of facsimile reprints of ancient Spanish manuscripts and incunabula for the university library.

Hutchinson, E. C., \$100 for the purchase of foreign statistical publications for the university library.

Irving, Samuel C., of the Paraffine Paint Company, fourteen five-gallon cans of P. & B. paint, and seven five-gallon cans of carbon bisulphide, for the Mining department.



Jones, Mrs. Carrie M., \$100,000, bequeathed as an endowment for scholarships for young men in the University.

Los Angeles College Clinic Association, the following property to the Regents, as site, building, and equipment for the Los Angeles Medical Department of the University of California:

Ground value of lot running through from North Broadway to Castelar street.....	\$ 50,000
Ground value of lot for Barlow Medical Library Building. (Original donor, Dr. W. Jarvis Barlow of Los Angeles).....	5,000
Building on Barlow Medical Library lot. (Original donor, Dr. W. Jarvis Barlow of Los Angeles) .....	30,000
Equipment and contents, Barlow Medical Library....	5,000
Hendryx Laboratory Building. (Original donor, Dr. Wilbur A. Hendryx of Los Angeles).....	6,000
Equipment Hendryx Laboratory.....	2,000
Founders Building. (Erected by Faculty Los Angeles College of Medicine).....	15,000
Selwyn Emmett Graves Memorial Dispensary Building (Donor, J. A. Graves, Esq., of Los Angeles)..	20,000
Equipment of Selwyn Emmett Graves Memorial Dispensary .....	1,000

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Grand total entire property.....\$134,000

Massachusetts Association for the Relief of California (organized after the San Francisco earthquake and fire in April, 1906), \$100,000 for the founding of free beds at the University Hospital.

Medal Loan Fund, \$269.12, created by selling to the United States Mint the gold medals refused by Joseph B. Garber, Miss Katherine Felton, and Arthur M. Seymour, to be used for loans to students.

Member of the Class of 1908, \$125 for the repayment of a state of California Scholarship of which this student was the recipient.

Meyer, Eugene, of New York, a bronze replica of Gutzon Borglum's bust of Lincoln.

Mills, D. O., \$6,000 as his annual contribution for the D. O. Mills Expedition to the Southern Hemisphere.

Mills, Ogden, \$1,000 for the support of the D. O. Mills Expedition, to the Southern Hemisphere.

- Nuttall, Mrs. Magdalena, of Tunbridge Wells, England, 33 volumes on lace, for the university library, to be delivered after the death of Mrs. Nuttall.
- Pacific Live Stock Company of San Francisco, free use of stock and accommodations throughout the season (summer of 1909) for the members of the Annie M. Alexander expedition to Northwestern Nevada.
- Palmer, Mrs. Carolyn Huntoon, a framed engraving of King Lear, by William Sharpe.
- Radford, Miss K. C., a nearly complete set of the minutes and proceedings of the Institute of Civil Engineers.
- Repgle, D. B., a mechanical water wheel governor for the regulation of constant speed of water wheels and a 30-inch diameter tangential water wheel for the department of Electrical Engineering.
- Risdon Iron and Locomotive Works, a 30-inch tangential water wheel, including nozzle, tip, and flange connections, for the department of Electrical Engineering.
- Robertson, George M., and the Board of Fire Underwriters of the Pacific, valuable advice in connection with fire protection on the university campus.
- Roosevelt, Colonel Theodore, an African bull elephant.
- Rumford Committee of the American Academy of Arts and Sciences, Boston, \$300 for the purchase of certain parts of a quartz spectrograph for the Lick Observatory.
- Sanborn, Mrs. Frances B., \$15,000, as endowment for three "Sheffield Sanborn scholarships," one in medicine and two in law.
- San Francisco Maternity, \$10,000 toward a fund for free beds in the Maternity Ward of the University Hospital.
- Sather, Mrs. Jane K., \$40,000 for the Sather Memorial Gate at the Telegraph avenue entrance to the university grounds.
- Setchell, Professor W. A., an algal herbarium consisting of 15,468 specimens of algae.
- Shackleton, Sir Ernest, a suite of rocks from the Antarctic continent, for the department of Geology.
- Sharp, Dr. James G., \$500 for an X-Ray and Photographic Laboratory for the college of Dentistry.
- Southern Pacific Railway Company, the Agricultural Demonstration Train (in service 68 days, covering 3,436 miles of road) to bring to public attention improved methods of agriculture.

- Spreckels, Rudolph, \$100 for the laboratory of experimental surgery at the University Hospital.
- Stow, Vanderlyn, of the Thomas Day Company, two ornamental iron lamp-posts for electroliers, to be placed at the main entrance at the Affiliated Colleges.
- Strauss, Levi & Co., \$3,500 for the Levi Strauss Scholarships for the year 1908-09.
- Taussig, Regent R. J., \$100 for the maintenance of the Bryce Historical Essay Prize.
- Thompson, Mrs. Willard D., bequest of property in Chicago leased until 1988 at \$3,000 per annum, and the residuum of personal estate, after payment of minor bequests, as the "Willard D. Thompson Memorial Fund" for scholarships in the University of California, to be awarded to residents of Utah, in memory of a son, member of the class of 1894.
- Trask, Mrs. Blanche, of Avalon, archaeological collections from the Santa Barbara Islands.
- United Iron Works, through Mr. R. H. Beck, a set of cast iron plates or discs for the department of Electrical Engineering.
- Wallace Machinery Company of Champaign, Illinois, a sprayer for the Agricultural Experiment Station.
- Walter, Emanuel, \$50,000 (less legal expenses, etc.) and his art collection given by will to the San Francisco Art Association.
- Whitaker, Horace, 320 acres of sequoia forest land in Tulare County, being one of the finest bodies of "big tree" timber land in the world.

## GIFTS FOR THE STUDENT INFIRMARY. \*

1908-09.

The Oakland Tag Day committee, \$600.

Mr. William E. Woolsey, \$150 for the furnishing of a room to be known as the "Woolsey Room."

Mrs. Emma Shafter Howard, \$150 for the furnishing of a room in memory of her son, Karl Shafter Howard.

One hundred and fifty dollars for the furnishing of a room to be known as the "Caroline Kohler Memorial Room." This money was transmitted through Miss Alice Hilgard as a gift in Miss Kohler's memory, from her family and friends.

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\* Reprinted from the Reports of the Secretary of the Regents for 1908-09 and 1909-10.

Mr. George Shima, \$150 for the furnishing of a room to bear the name of the "Shima Room."

The Class of '76, \$150 for the furnishing of a room.

Mr. John Francis Smith and Mr. Charles Smith, \$150 for the furnishing of a room to be known as the "Mary S. Smith Memorial Room."

Mr. W. L. Woodward and Mr. Edward Beardsley, a brass clock.

Mr. F. M. Smith, \$50 for the purchase of instruments.

Mr. H. L. Swasey, a picture, "The Surrender of Buda."

Mr. Vickery of the firm of Vickery, Atkins & Torrey, a picture.

Mr. and Mrs. F. J. Symmes, \$150 for furnishing and equipping a room in the Infirmary as a memorial to their son, Stanley Richardson Symmes.

1909-10.

#### MONEY.

Margaret Davis, \$5.

Dr. Ernest Sisson, \$10.

The Prytanean Society, \$145.05.

#### PICTURES.

H. M. Sanborn & Co., "The Staircase of the Bargello Palace," by Giovanni Hartmans.

Bowman & Co., "Lady Louisa Fitzpatrick" by George Romney.

Mr. H. S. Swasey, Mr. W. G. Wood, Mr. F. P. Tatum, "Landscape" by Van der Neer.

Mr. Marshall Steel, "Landscape" by Corot.

S. and G. Gump, "Desdemona's Palace."

Mr. P. S. Howe, Jr., Mr. H. S. Swasey, "Madonna" by Botticelli.

Mr. H. S. Swasey, "Picture of a Man" by Rembrandt.

#### BOOKS.

Mrs. D. C. Borland, 1.

Mrs. Emma Shafter Howard, 1.

Miss Sibyl Marston, 1.

Mrs. Chauncey Wetmore Wells, 15.

Class of 1910, 1.



## MISCELLANEOUS.

John Breuner & Co., Oriental rug.

Regent F. W. Dohrmann, phorometer; Twentieth Century ophthalmometer; table.

Mrs. Henry S. Glass, three screens; six bedroom articles.

Mrs. Emma Shafter Howard, bust of Dante; statuette of John Harvard; relief of Dr. Joseph LeConte.

Mr. Henry Kahn, two sets of Holgrens color tests; one set of trial lenses; skiascopic mirror.

Kohler & Chase, zonophone.

Dr. C. W. Richards, Oriental rug.

Mrs. Leon J. Richardson, seven pictures, two vases.

John F. and Charles Smith, bas relief: "Singing Boys."

Taft & Pennoyer, Oriental rug.

## GIFTS FOR THE UNIVERSITY HOSPITAL. \*

1908-09.

Mr. Adam Andrew, The Shasta Water Company, and Mr. Burt L. Davis, \$100 each, for the purchase of surgical instruments.

President and Mrs. Benj. Ide Wheeler, \$1,795.65, balance of a relief fund placed in their hands.

The Pacific Hardware and Steel Company, \$75 for appliances for the X-ray plant.

Miss Jennie Crocker, \$500 for the maintenance of a free bed for one year.

Miss Leona Lebus, a bequest of \$4,000 for the maintenance and care of free patients, by preference, chronic cases, non-resident of San Francisco.

A member of the Board of Regents, a note for \$1,000.

Mr. Arthur G. Towne, \$443.25, the residue of relief funds placed in his hands by eastern friends after the earthquake.

A lady who wishes to remain unknown, \$200 for the care of patients unable to pay for extra days at the hospital.

The San Francisco Maternity, \$10,000, as endowment for free beds to be known as the "San Francisco Maternity Ward."

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\* Reprinted from the Reports of the Secretary of the Regents for 1908-09 and 1909-10.

1909-10.

Miss Julie Helen Heynemann, \$50 toward an endowment for the care in the University Hospital of any sick artist in San Francisco, or the wife or child of an artist in San Francisco.

Mrs. Benj. Ide Wheeler, trustee, \$1,805.65 for the equipping of a laundry.

Mrs. James Coffin of Ross, Marin county, California, \$150 to furnish a private room.

Mrs. Elise A. Drexler, \$500 as a donation toward the "Diet Kitchen," or any more pressing need that seems best.

San Francisco Maternity, \$5,000 additional endowment for the San Francisco Maternity Ward.

Mrs. Martha C. Lebus, in pursuance of the will of her daughter, Miss Leona Lebus, \$4,000 as permanent endowment, to be known as the "Leona Lebus Fund," the income to be used for the care of chronic cases, by preference non-residents of San Francisco.

William Norwood Breeze (baby), \$20, to be expended for supplies for the nursery.

Dr. Wallace I. Terry, an air bed.

Miss Ida Vincent, a wheel stretcher.

Dr. Wallace I. Terry, \$100; Mr. William Kent, \$100; Mr. Templeton Crocker, \$50; Mr. Henry T. Scott, \$50; Mr. F. H. Buck, \$100; Dr. Dudley Tait, \$125; Mr. James D. Phelan, \$100; Mr. William Thomas, \$50; Mr. Jacob Stern, \$50; Mr. Rudolph Spreckels, \$100, and Mr. Burke Corbet, \$50, all for the Laboratory of Medical Research.

#### GIFTS FOR DEPARTMENT OF ANTHROPOLOGY. \*

From Mrs. Phoebe A. Hearst, a pair of Jewish candlesticks, five plaster cast tablets (Egypt), a brass belt buckle (Russia), a Russian eikon, a palm leaf book with wooden covers (Laos), a small Buddha of metal, gilded (Laos); a scabbard and knife (China), a tinder pouch of leather with brass fixings (Japan), a mariner's compass (Japan), five baskets, mostly Californian; a telescope basketry pouch, a band of yellowhammer feathers (California), a shell-bead necklace (New Guinea), a sling.

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\* Reprinted from the Report of the Secretary of the Regents for 1909-10.

From Miss Laura L. Donnelly, 143 pieces including ancient pottery heads, a copy of calendar, and an incised pottery cup, from Mexico.

From Mrs. John Bidwell, a Maidu basket.

From Mrs. Blanche Trask, 1,500 artifacts consisting of implements and ornaments of bone, stone, shell, and textile fragments illustrative of the ancient life and culture on the islands in the Santa Barbara Channel. This number gives the catalogue entries; the actual number of separate objects is considerably larger; 50 artifacts consisting of fetishes, potsherds, and implements of stone, bone, and shell, from New Mexico; 25 specimens of material in physical anthropology, including ten complete skulls and other remains, from prehistoric mounds on the Santa Barbara Channel Islands; 50 specimens of natural history material, comprising skulls of the dog, fox, seal, sea-lion, otter, and goat, from prehistoric mounds on the Santa Barbara Channel Islands; about 800 miscellaneous specimens, including fossils, shells, mineralogical, botanical, and natural history material.

From A. Earl Patterson, pietographs from Inyo county.

From Mrs. Sarah A. Lyman, Pomo "sun" basket.

From Tyler G. Henshaw, 30 obsidian implements from Napa county.

From Eric Boman, *Antiquites de la Region Andine*, Pt. I, by Eric Boman; *Antiquites de la Region Andine*, Pt. II, by Eric Boman.

From Miss Ethel Woods, *La Piedra Pintada de la Carrisa*, by Ethel Woods.

From Walter E. Roth, some technological notes from the Pomeeroon district, British Guiana, Pt. I, by Walter E. Roth.

From E. A. Hayes, M.C., *memoir of George Brown Goode*, by S. P. Langley.

From F. W. Putnam, *Putnam Anniversary Volume*, F. Boas, ed.; *the Ethnologic Dictionary of the Navaho Language*, by the Franciscan Fathers.

From the Atchison, Topeka, and Santa Fé Railroad, *Indians of the Southwest*, by George A. Dorsey.

From M. Uhle, *University of Kansas Bulletin*, vol. 9, no. 5.

From A. Van Gennep, *La Formation des Legendes*, by A. Van Gennep.

GIFTS FOR THE CALIFORNIA MUSEUM OF VERTEBRATE  
ZOOLOGY.\*

NOTE.—The Museum was founded and is maintained through the munificence of Miss Annie M. Alexander. She promised at the outset \$6,000 per annum for its support; but her provisions for its maintenance have far exceeded this original assurance. The Museum on June 30, 1910, contained catalogued specimens as follows: 12,765 birds, 9,553 mammals, 1,635 reptiles, and 771 sets of birds' eggs.

Annie M. Alexander, 430 mammals, 733 birds, 296 reptiles, 29 sets of birds' eggs (from the 1909 Alexander expedition to Nevada); 497 mammals, 600 birds, 4 batrachians (from the 1909 Alexander Alaska expedition); 17 reptiles (from Ventura county); 3 mammals (beaver, from Stanislaus county); 33 batrachians (from Alaska); 5 large mammals (4 bears, 1 lynx, from Alaska); 7 mammals, 117 birds (from Hawaiian Islands).

Annie M. Alexander and Louise Kellogg, 38 mammals, 97 birds, 57 reptiles, 2 sets birds' eggs (from Humboldt county, Nevada); 4 mammals, 30 birds (from Marin county); 34 birds (from Solano county); 11 birds (from Monterey Bay).

Harold H. Bailey, 26 sets of birds' eggs (from Virginia).

Brandler & Reynolds (taxidermists), 1 bird (hawk, from Los Angeles).

Harold C. Bryant, 2 birds, 1 set of eggs, and 3 reptiles (from vicinity of Berkeley).

Charles Camp, 1 bird (magpie, from Wyoming), 3 reptiles (from Los Angeles county).

W. Lee Chambers, 2 mammals (moles, from Los Angeles).

Joseph Dixon, 3 mammals, 3 birds (from San Francisco Bay region).

Roy H. Elliott, 288 sets of birds' eggs (chiefly from Central California).

Eugene J. Fischer, 1 mammal, 3 birds (skeletons).

Professor N. L. Gardner, 1 reptile (snake, from Berkeley).

M. French Gilman, 2 mammals, 8 birds (from Arizona).

E. B. Gould, 1 bird (pigmy owl).

Hilda Wood Grinnell, 14 birds (from Southern California).

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\* The list is reprinted from the Report of the Secretary of the Regents for 1909-10.



Joseph Grinnell, 35 mammals, 92 birds, 338 reptiles (from Southern California).

Allen E. Hasselborg, 3 mammals, 1 bird (from Alaska).

Dr. J. C. Hawver, 6 mammals (bats, from Placer county).

Professor L. Hutchinson, 1 reptile (snake, from Berkeley).

W. B. Judson, 496 birds (from Arizona and Southern California).

Louise Kellogg, 16 mammals, 57 birds (from Independence Lake, Nevada county).

Professor C. A. Kofoid, 1 mammal (ocelot, from Mexico).

Joseph Mailliard, 1 mammal (*Neurotrichus*, from Marin county).

Lloyd Morrill, 1 mammal (*Bassariscus*, from Alameda county).

Pingree I. Osburn, 2 sets of birds' eggs (from Mexico).

Virgil W. Owen, 1 mammal, 1 bird (from Arizona).

W. B. Parker, 1 bird (European partridge).

Milton S. Ray, 1 bird (melanistic hawk, from Lake Tahoe).

Chas. H. Richardson, 24 mammals, 3 birds (from Southern California).

John Rowley, 1 bird (egret), 1 mammal (deer head).

C. E. Scott, 1 reptile (*Charina*, from Oregon).

Austin Paul Smith, 2 birds (from Texas).

Frank Stephens, 1 mammal, 15 birds, 3 reptiles (from Southern California).

Norman Stern, 2 mammals (from Berkeley).

H. S. Swarth, 65 mammals (from Arizona and Southern California).

Walter P. Taylor, 68 mammals, 478 birds, 1 reptile (from Southern California).

Winifred N. Wear, 2 mammals (bats, from Fresno).

G. S. Young, 1 reptile (from Mariposa county).

#### GIFTS FOR THE HERBARIUM, BOTANICAL MUSEUM, AND BOTANICAL GARDEN. \*

*For the Herbarium:*—Miss Annie M. Alexander, Oakland, 346 phaenogams and 213 cryptogams collected on the Alexander Alaskan Expedition of 1907 by Mrs. K. Stephens. (See further

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\* Reprinted from the Report of the Secretary of the Regents for 1909-10; the list includes gifts dating July 1, 1908, to June 30, 1910.

under California Museum of Vertebrate Zoology); Mr. David M. Baleh, Coronado, 4 packages of sea weeds; Bausch and Lomb Optical Company, Rochester, N.Y., an elaborate chart of the microscope (for laboratory use); Misses A. and A. Bayles, Pacific Grove, 22 specimens of marine algae; Mr. J. T. Bearss, University of California, Tulare Station, 15 sheets of phaenogams; Professor C. B. Bradley, University of California, 18 sheets of plants from Siam (donated through Professor Jepson); Mr. and Mrs. T. S. Brandegee, University of California, 110 sheets of phaenogams collected by Miss Alice Eastwood, and 200 mosses of the Pringle distribution, both sets being purchased for the University Herbarium, also 1,720 sheets gathered in California. (See also under Dr. C. A. Purpus); Mr. George D. Butler, Yreka, 28 sheets of cryptogams and 5 sheets of phaenogams from Siskiyou county; Miss Carlotta Case, '04, Oakland, 5 sheets from the Santa Cruz Mountains; Mr. T. F. Cheeseman, Auckland, New Zealand, 16 sheets of Pittosporums; Mr. I. J. Condit, San Luis Obispo, 81 sheets of California phaenogams and 13 Ohio plants; Miss Kate Conger, Carpenteria, 4 sheets of phaenogams from near Winchester; Dr. A. Davidson, Los Angeles, 24 sheets of phaenogams from the Sequoia National Park, and 139 sheets of phaenogams from Arizona, also 4 sheets of miscellaneous plants and 5 Compositae from Southern California; Dr. Horace Davis, San Francisco, 3 sheets of Cuscuta and ferns; Miss Vernille De Witt-Warr, Tallac, 11 sheets of plants from the Sierra Nevada; Miss Laura L. Donnelly, '00, La Mesa, Cananea, Sonora, Mexico, 78 sheets of Mexican plants; Mr. C. H. Dwinelle, Fulton, 2 sheets of phaenogams; Miss Alice Eastwood, Berkeley, 28 sheets of cultivated plants from Santa Barbara county; Mr. E. M. Ehrhorn, Board of Agriculture and Forestry, Honolulu, H. I., 25 sheets of cryptogams and 111 sheets of phaenogams, largely European; Mr. T. R. de Esparza, Calexico, 1 sheet of *Asclepias erosa*; Mr. C. N. Forbes, '08, Honolulu, H. I., 117 sheets of *Cupressus* collected at the request of Professor W. L. Jepson, 117 sheets of miscellaneous California plants, and 10 sheets of Hawaiian Pittosporums; Mr. A. S. Foster, Hoquiam, Washington, 40 specimens of marine algae from Southwestern Washington; Professor T. C. Frye, University of Washington, Seattle, 1 sheet of marine algae; Dr. N. L. Gardner, Los Angeles, 282 specimens of algae from Puget Sound, 145 specimens of fungi from Whidbey Island, Washington, 110 specimens of California marine algae, 30 specimens of fungi from Pacific Grove, 33 miscellaneous cryptogams, and with Professor W. A. Setchell, 5,855 dried specimens of fungi, mostly hypogaei; Miss Helen D. Geis, Los Angeles, 7 sheets of rare Sierran plants; Mr. R. S. Gray, Oakland, 20 specimens, being a continuation of a set of "Ameri-

can Hepaticae'' (nos. 41-60), prepared by Caroline Coventry Haynes; Gray Herbarium of Harvard University, Cambridge, Massachusetts, parts of two types; also, through the courtesy of Professor B. L. Robinson, 79 mounted sheets of the H. H. Smith plants from the United States of Colombia; Mr. George R. Hall, Riverside, 14 sheets of *Plantago* and *Chaenactis*, 57 sheets from the San Bernardino mountains, and with H. M. Hall, 423 sheets from the southern Sierra Nevada; Professor H. M. Hall, University of California, 53 sheets of native plants and 190 sheets of cultivated plants from Southern California, 145 sheets from Marin and Sonoma counties, 1,010 sheets from Trinity county, and with George R. Hall, 423 sheets from the southern Sierra Nevada; Dr. A. C. Herre, Los Gatos, 80 specimens of rock and tree lichens; Mrs. Emma Shafter Howard, San Francisco, 1 microscope and accessories, for the laboratory; Mr. George Wharton James, Pasadena, 103 sheets of plants from the Grand Cañon, sent at the request of Professor W. L. Jepson; Professor W. L. Jepson, University of California, contributions from various correspondents. (See under C. N. Forbes, G. W. James, Benj. Macomber, and Dr. R. J. Smith); Miss Katherine D. Jones, '96, Berkeley, 1,260 sheets of critical material of *Acacia* and 566 sheets of other cultivated plants; Professor M. E. Jones, Salt Lake City, Utah, 84 sheets of critical material from western North America, 1 sheet of *Ricciocarpus natans*, and 26 sheets of *Boraginaceae*; Mr. Wyatt W. Jones, Redding, a herbarium of 3,565 sheets of plants mostly from Montana, but including a collection of 459 sheets gathered in the eastern United States by E. J. Moore; Imperial Botanical Garden, St. Petersburg, kindness of Professor Fischer von Waldeheim, 200 sheets of phaenogams; K. K. Zoologischen Station of Austria, through J. S. Schiller, 56 specimens of marine algae; Miss Louise Kellogg, Oakland, 53 sheets of Nevada plants gathered on the California Museum of Vertebrate Zoology Expedition of 1909; Miss Eva Kennedy, Downieville, 9 sheets of phaenogams collected near Downieville, Sierra county; Professor P. B. Kennedy, University of Nevada, Reno, 8 sheets of selected material; Königl. Botan. Garten and Museums, Berlin, Germany, kindness of Professor A. Engler and Dr. J. Urban, 500 sheets of foreign plants, including several types; Mr. Benjamin Macomber, Redding, through Professor W. L. Jepson, 4 sheets of selected cypress material; Professor John Macoun, Geological Survey, Ottawa, Canada, 53 sheets of *Polemoniaceae*, 128 specimens of algae; Professor O. Mattiolo, Turin, Italy, 15 dried specimens of hypogaeous fungi and one specimen in liquid; Mr. Theodore Minthorn, Los Angeles, 96 sheets from Mono county and 80 sheets from Lincoln county, Nevada, all collected by Miss Maud Minthorn, 2 sheets

of Hoffman seggia falcaria; New York Botanical Gardens, New York City, 22 specimens, all of type collections, kindness of Dr. P. A. Rydberg; Professor Edwin L. Newcomb, Philadelphia, Pa., 105 mounted sheets of eastern plants. Mr. M. B. Nichols, University of California, 105 specimens of algae from La Jolla and San Clemente Island; Mr. S. B. Parish, San Bernardino, 2 sheets from the type collections of *Trifolium Grantianum* and *Gilia dianthoides farinosa*, 107 sheets for the University distribution, and 24 sheets of miscellaneous plants; Mr. A. J. Pieters, Hollister, 1 sheet of *Streptanthus heterophyllus*, 18 sheets of *Quercus* and *Salix*, 6 sheets of *Cupressus*; Dr. C. A. Purpus, University of California, 2,019 sheets of Mexican plants determined by T. S. Brandegees, also 415 duplicates from earlier Mexican collections; Mr. F. M. Reed, Riverside, 63 sheets from Santa Catalina Island and the San Bernardino mountains, and 1 sheet of *Plagiobothrys Cooperi*; Miss Minnie Reed, Honolulu, H. I., 818 specimens of algae; Riks Museum (Botaniska Afde) of Stockholm, Sweden, 112 arctic marine algae, chiefly collected by Kjellman; Messrs. Alymer and Sinclair Robinson, 198 marine algae from Island of Nihau, Hawaii; Mr. D. C. Rose, Sherwood, 2 sheets of *Cypripedium*; Mr. J. A. Sanford, Stockton, 6 sheets of miscellaneous phaenogams; Professor W. A. Setchell, University of California, 175 sheets of phaenogams from the vicinity of San Francisco, 79 sheets of *Habenaria* and *Aphyllon*, 210 marine algae from Dillons Beach, 144 sheets of *Nicotiana*, and with Dr. N. L. Gardner, 5,855 dried specimens of fungi, mostly hypogaei; Mrs. Frida Sexauer, '08, Santa Barbara, 122 sheets of Santa Cruz Island plants and 10 sheets from Santa Barbara; Sierra Club, kindness of Miss Katherine D. Jones, 4 sheets of rare Sierran plants; Miss E. H. Smith, University of California, 4 sheets of fungi (from correspondents) and 24 sheets of economic fungi (mostly collected by Mr. C. O. Smith); Dr. R. J. Smith, Milpitas, 927 sheets of European plants donated through Professor W. L. Jepson, and 53 sheets of California plants; Paul E. C. Standley, Agricultural College, New Mexico, 13 sheets of selected *Nyctaginaceae*; Mr. O. D. Stoeser, Watsonville, 2 sheets of phaenogams; Miss Myrtle Stone, Kelseyville, 1 phaenogam; Miss Susan Stokes, San Diego, 2 specimens of marine algae from La Jolla; Professor W. T. Swingle, U. S. Department of Agriculture, Washington, D.C., 29 specimens of leaf fungi from Mt. Tamalpais; Mr. C. H. Tebbs, Berkeley, 1 phaenogam; Mr. J. P. Tracy, '03, Eureka, 537 sheets of *Compositae* and 672 sheets of other phaenogams, all from northwestern California; California Museum of Vertebrate Zoology, kindness of Miss Annie M. Alexander, 64 phaenogams, collected on the expedition of 1908 by Mr. Edmund Heller, and 119 sheets of Nevada plants gathered



on the expedition of 1909 by Mr. W. P. Taylor and Mr. C. H. Richardson, Jr.; Mrs. C. M. Wilder, Riverside, 127 sheets of Southern California phaenogams including a set of *Gilia tenuiflora altissima*; Miss H. A. Walker, University of California, 905 sheets of plants from middle California; Mme. Weber-von Bosse, Eerbeek, Holland, 190 specimens of algae. (Total number of specimens received by gift from July 1, 1908, to July 1, 1910, for the herbarium, after deducting for entries counted twice, 27,243).

*For the Botanic Garden:*—Miss Margaret E. Adamson, Larkspur, seeds of *Pentachaeta bellidiflora*; Professor E. B. Babcock, University of California, 2 packages of seeds; Mr. George S. Baker, San Francisco, 3 specimens of cacti from the United States Plant Introduction Garden, Chico; Dr. S. M. Barrett, New York, 30 packets of seeds from Ecuador, through Professor Jepson; Mr. J. T. Bearss, University of California, Tulare Station, cuttings from *Mimulus glutinosus*; Botanic Gardens, Bukarest, Roumania, 7 packets of seed of *Nicotiana*; Mr. and Mrs. T. S. Brandegee, University of California, seed of *Thevetia* and 3 packets of miscellaneous seed from Mexico, 15 packets of seed from California, living plants of *Sedum divaricatum* and *Sedum radiatum*, cuttings from *Mimulus Clevelandii*, 1 packet of seed of *Brodiaea* from Tehachapi, 3 living plants of *Cotyledon*; Mr. Luther Burbank, living plant of *Allium reticulatum*; Mr. H. P. Chandler, '02, St. Louis, Missouri, 1 packet of seed of *Lupinus excubitus* from the Panamint Mountains; Mr. John Lewis Childs, Floral Park, New York, seeds of *Wonderberry*; Mr. Compton, Montecito, seed of *Phyllanthus chiapensis*; Mr. William C. Cusick, Union, Oregon, seed of *Nicotiana attenuata*, cultivated by the Indians; Mr. J. Dall, Rockville, New Zealand, 1 packet of seed of *Acacia aneura*; Dr. A. Davidson, Los Angeles, 1 packet of seed of *Gila abrotanifolia* and 1 of *Phacelia tanacetifolia*; Dr. Geo. S. Donnelley, '97, San Francisco, 1 packet of seed from the northern part of Meath, Ireland; Dr. Gustav Eisen, San Francisco, seed of rain plant; Mr. T. R. de Esparza, Calexico, seed of *Aselepias*; Dr. F. Franceschi, Santa Barbara, 10 living plants; Professor H. M. Hall, University of California, 9 packets of seed from the southern Sierra Nevada, 1 packet of seed of *Nicotiana trigonophylla*, and 1 packet from Trinity county; Sir T. Hanbury, La Mortola, Ventimiglia, Italy, 6 packets of *Nicotiana* seed and 5 packets of other seed; Professor F. D. Heald, University of Texas, Austin, seed of *Nicotiana repanda*; Miss Katherine B. Hershey, '05, Berkeley, 1 packet of seed of *Lupinus sericatus*; Miss C. M. Hoak, '00, Los Angeles, 3 packets of *Godetia* seed; Hortus Botanicus Reg. Academiae Oeconomicae Bohemicae, Tabor, Bohemia, 32 packets of

Nicotiana seed; Hortus Botanicus, Universitatis Caesareae Novae Rossiae, Odessa, 2 packets of Nicotiana seed; Mrs. D. O. Hunt, Pope Valley, seed of Allium; Mr. Bernard Jackson, Pacific Beach, 1 packet of seeds of Coreopsis maritima; Jardin Botanique de la Faculté de Médecine de Lyon, 4 packets of Nicotiana seed; Professor W. L. Jepson, University of California, 2 packets of Godetia seed and 43 packets of seed of other California plants; Mr. J. L. Jernigan, El Centro, bulbs of desert lily; Professor Marcus E. Jones, Salt Lake City, Utah, 1 packet of Gilia arenicola seed; Mr. H. A. Lafler, San Francisco, seeds of Abies venusta from the Santa Lucia Mountains (through Mrs. Brandegee); Mr. Albert Levy, Hemet, 1 packet of Vicia villosa seed; Mr. John McLaren, Golden Gate Park, San Francisco, 5 living plants of Tibouchina (Lasiandra); Mr. Marsden Manson, San Francisco, 1 packet of seeds from Colorado, collected by Mrs. B. W. Rieter (through Professor E. J. Wicks); Mr. H. J. Matthews, Dunedin, New Zealand, seed of the Kauri pine; Mrs. J. A. Metzler, San Luis Obispo, bulbs, of Fritillaria; Missouri Botanical Garden, St. Louis, 10 packets of Nicotiana seed; Mr. W. H. Morse, Santa Barbara, cuttings of 5 ornamental plants; Mr. Theodore Payne, Los Angeles, 1 packet of seed of Pentachaeta aurea var. from El Toro, Orange county; Mrs. Maude M. Peaslee, Blue Canyon, 1 packet of seed of Cornus Nuttallii; Mr. W. G. Perrine, Berkeley, 1 packet of seed of Nicotiana glauca; Mr. H. B. Phillips, Berkeley, 2 packets of seed; Dr. C. A. Purpus, University of California, seed of Beaucarnea purpusii, a new Loeselia, Conzattia arborea, Robinsonella cordata, Adolphia infesta, Setchellanthus, Erythrina petraea, and Dioon Purpusii, 4 bulbs of Calochortus, living specimens of Echevaria, all from Mexico; Dr. A. Robertson-Proschowsky, Nice, France, 2 packets of seed; Mr. L. D. Ryan, Orseco, Oregon, seeds of white and red baneberry; Mr. E. E. Schellenger, Neighbors, 3 packets of grass seed; Professor W. A. Setchell, University of California, 5 packets of seed and 1 living plant; Miss Christina Simpson, Salmon Falls, seed of Aristolochia and Rhamnus tomentella; Mr. Geo. B. Sudworth, United States Forest Service, Washington, D. C., 1 packet of seed of Cupressus arizonica; Mr. H. S. Swarth, University of California, 3 living plants from Alaska; Mr. Leslie Symmes, University of California, seed of milkweed; J. M. Thorburn & Company, New York, 1 packet seed of Asclepias curassavica; Transvaal Department of Agriculture, Pretoria, Transvaal, through Mr. Joseph Burt-Davy, seed of the Bambarra ground nut; Mrs. Blanche Trask, Avalon, 5 packets of seed; Mr. J. P. Tracy, '03, Eureka, living plants of Ranunculus maximus and 5 packets of seed; United States Department of Agriculture, Division of Seed

Distribution, Washington, D. C., kindness of Mr. A. F. Shamel, 27 packets of *Nicotiana* seed; Villa Thuret, Antibes, Alpes-Maritimes, 1 packet of *Nicotiana* seed; Miss H. A. Walker, University of California, seed of *Phacelia malvaefolia*; Professor A. W. Whitney, University of California, 1 live plant of *Trifolium*; Mr. Frank A. Wilson, '11, Oakland, seed of *Lupinus densiflorus*; Mr. William Wolters, Berkeley, 1 living plant of *Adlumia cirrhosa*. (Total number of specimens received by gift from July 1, 1908, to July 1, 1910, for the Botanic Garden, 311.)

*For the Botanical Museum:*—Mrs. H. D. Babcock, Mt. Wilson, a book of ferns collected in the New Hebrides Islands in 1859-60 by Mary Geddy Matheson; Mr. Holmes Beckwith, a book of ferns from the Hawaiian Islands; Professor C. B. Bradley, University of California, 6 museum items from Siam (cones, acorns, etc.); Mrs. Katherine Brandegge, Berkeley, fruits of carob tree, purchased in the San Francisco market; Mr. Drury Butler, '03, Sacramento, specimen of "Yareta" or *Azorella* from the Chilean Andes, with 2 photographs; Mr. T. F. Cheeseman, Auckland, New Zealand, 3 specimen plates of New Zealand flora; Mr. Compton, Montecito, capsules of a new *Phyllanthus* (*P. chiapensis*) grown at Montecito; Dr. N. L. Gardner, Los Angeles, with Professor W. A. Setchell, 1176 specimens of fungi, mostly hypogaei, in liquid; Director Joseph Grinnell, University of California, 2 specimens of *Martynea*; Professor H. M. Hall, University of California, 2 fruits of *Aleurites moluccana* and a branch of *Calothamnus* from Santa Barbara; Professor E. W. Hilgard, University of California, a set of 200 wood sections prepared in Germany and distributed by Nordlinger; Professor W. L. Jepson, University of California, fasciated redwood twig from Pescadero, tan oak bark from the Big Sur, 8 cones of *Pinus monticola*, and acorns of *Quercus morehus*; Mr. Wyatt W. Jones, Redding, 1 specimen of *Quercus morehus*; Miss Elizabeth Reed, Carmel, 1 specimen of *Cupressus Goveniana*; Mr. E. D. Rowe, Santa Barbara, 1 trunk of *Lyonothamnus floribundus* from Santa Cruz Island; Professor W. A. Setchell, University of California, 1 specimen of *Leptocladia*, 2 bottles of liquid material of *Aphyllon comosum* parasitic on *Grindelia cuneifolia*, and with Dr. N. L. Gardner, 1176 specimens fungi, mostly hypogaei, in liquid; Mrs. S. J. Stockton, Ramona, *Juniperus occidentalis* from Oregon. (Total number of plants received by gift from July 1, 1908, to July 1, 1910, for the Botanical Museum, after deducting for entries counted twice, 1,423. Grand total of donations to the department between these dates, after deducting for entries counted twice, 28,977.)

## GIFTS FOR THE CIVIL ENGINEERING DEPARTMENT.\*

Pacific Portland Cement Company, 75 barrels of Golden Gate cement.

Henry Cowell Lime and Cement Company, 100 sacks of Mt. Diablo cement.

Forest Service, U. S. Department of Agriculture, tan-bark oak and eucalyptus for senior student tests.

C. Derleth, Jr., Engineering periodicals, 35 volumes, for the Civil Engineering Library.

John B. Leonard, corrugated bars for senior student tests.

Carnegie Brick and Pottery Company, 150 pressed brick for tests in the laboratory.

Mr. Ward Hall, two pictures of the Russian River Bridge, Western Pacific Railroad.

McDougall Bros. and Mr. J. B. Leonard, architectural and engineering drawings for the Y. M. C. A. Building in San Francisco.

J. L. Warboys, two volumes for the Civil Engineering Library.

C. Derleth, Jr., ten volumes, miscellaneous, for the Civil Engineering Library.

Charles S. Fee, Southern Pacific Company, a large framed photograph of a freight engine.

Roebing Construction Company, 300 photographs of earthquake and fire destruction.

Austin Western Engineering Company, large framed picture of their road roller.

San Francisco Board of Public Works and Messrs. L. P. Rixford and V. V. Woods, blue-print plans of the City and County Jail, San Francisco.

Keuffel and Esser Co., surveying model-verniers.

Ransome Construction Company, Mr. G. J. Calder, blue-print plans of Hotel Sacramento.

Mr. John D. Isaacs, seven copies of standard specifications, Southern Pacific Systems.

Pacific Portland Cement Company, Mr. Morris Kind, 200 bags of Golden Gate cement.

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\* Reprinted from the Report of the Secretary of the Regents for 1909-10.



E. A. Gibbs, McClintie-Marshall Company, set of blue prints of large cantilever bridges and two large framed pictures of Beaver cantilever bridge.

Eugene Dietzgen Company, one set of splines.

Keuffel and Esser Co., two large framed pictures of factory and instruments.

Buff and Buff Manufacturing Company, four large pictures of transits and levels.

Mr. H. Wasteneys, two volumes on Structural Design, for the Civil Engineering Library.

Trussed Concrete Steel Company, forty copies of Reinforced Concrete Pocket Scales.

American Bridge Company, plans for the United States Government bridge over the Mississippi River at Fort Snelling, Minn.

#### GIFTS FOR THE DEPARTMENT OF MINING AND METALLURGY.\*

From Mrs. Phoebe A. Hearst, for the equipment of the Hearst Memorial Mining Building, to June 1st, \$5,893.82.

From the Raymond Granite Company, a dozen blocks of granite averaging in weight about three tons each; total weight, thirty-five tons. These blocks are of stone similar to that used in the construction of the new University buildings. They have proved of great service in the laboratory course in rock drilling.

From the Mason Regulator Company, of Boston, Mass., working models as follows: One No. 1 pump governor used for small air compressors, one  $\frac{3}{4}$ -inch pump pressure regulator, one  $\frac{3}{4}$ -inch reducing valve.

From the Star Electric Fuse Works, Wilkesbarre, Pa.: One push down electric blasting battery, one set of samples of electric fuses, illustrating types and methods of manufacture.

From Blake & Bilger Co., Oakland Cal., one Eclipse No. 2 Air Hammer Drill, made by the Shaw Pneumatic Tool Co., Denver, Colorado, and eight drills.

W. & L. E. Gurley, Troy, N. Y., five photographs of mine-surveying instruments.

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Catalogues in sufficient quantity to distribute to students were received from the following companies: California Cap Co., Oakland, Cal.; E. I. DuPont de Nemours Powder Co., San Francisco; Westinghouse Air Brake Co., San Francisco office; Jos. Dixon Crucible Co., San Francisco office; Bury Compressor Co., Erie, Pa.; Norwalk Iron Works Co., South Norwalk, Conn.; Chicago Pneumatic Tool Co., Chicago; Sullivan Machinery Co., San Francisco office; Jareeki Mfg. Co., Erie, Pa.; Harron, Rickard & McCone, San Francisco; Bausch & Lomb Optical Co., San Francisco office; Keuffel & Esser Co., San Francisco office; Wm. Ainsworth & Sons, Denver, Colorado; Curtis & Co., Mfg. Co., St. Louis, Mo.; Avery Stamping Co., Cleveland, O.; Baker & Hamilton Co., San Francisco; Troy Wagon Co., Troy, O.; Wyoming Shovel Works, Wyoming, Pa.; Bagley Grader Co., Tacoma, Wash.; Vulcan Steam Shovel Co., Toledo, O.; Syracuse Chilled Plow Co., Syracuse, N. Y.; Western Wheeled Scraper Co., Aurora, Ill.; Austin Mfg. Co., Chicago; Fresno Agricultural Works, Fresno, Cal.; Sterling Wheelbarrow Co., Milwaukee, Wis.; Vulcan Iron Works, Wilkesbarre, Pa.; Browning Mfg. Co., Cleveland, O.; Davenport Locomotive Works, Davenport, Ia.; Star Electric Fuse Works, Wilkesbarre, Pa.

From J. Fred Staver, U. C., Mining, '06, Telluride, Colorado, one Colorado model of single hand hammer for rock drilling.

One drawing of Dorr Classifier, from J. V. N. Dorr, Denver, Colorado; also one drawing of Dorr Continuous Slime Thickener.

From the Sullivan Machinery Co., Chicago, twenty-four 8 + 10 photographs of mining machinery and one framed picture of hoisting engine.

From the Pacific Tank and Pipe Company, three photographs of 12 post wooden tower and gas holder tanks.



# APPENDIX

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## STATISTICAL ADDENDA

COMPILED BY THE RECORDER OF THE FACULTIES

STATISTICS COMPILED BY THE UNIVERSITY PHYSICIAN





## STATISTICAL ADDENDA.

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COMPILED BY THE RECORDER OF THE FACULTIES.

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TABLE 1.—Statement of instruction and attendance in the courses given in the Academic Colleges at Berkeley, 1909-10.

EXPLANATORY NOTE.—One hour of lecture or recitation per week during the half-year counts for the student as one unit of credit toward a degree (for which at least 124 units are necessary); hours in laboratory or field work requiring preparation are estimated in units of credit at a lower rate than recitations or lectures.—In the column showing the number of students enrolled in the several courses, a colon (:) is used to separate the figures whenever it is necessary to exhibit separately the enrollment in any course for the first and for the second half-years, respectively.—A short dash (—) in any of the columns giving number of units, hours, or students, indicates that exact numerical statement is impossible.

In addition to the names of officers in charge of classes, in all departments, with their regular class appointments, the Statement includes the names of department assistants who had no regular class appointments.

## STATEMENT OF INSTRUCTION AND ATTENDANCE.

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Student
		1st half	2nd half	
AGRICULTURE, HORTICULTURE, AND ENTOMOLOGY.				
Prof. WICKSON.				
2. Agricultural Literature .....	1	1	....	79:....
4. University Extension in Agriculture .....	1	....	1	....:52
12. Horticulture .....	3	....	3	....:15
14. Agriculture .....	3	3	....	94:..
Prof. HILGARD, Emeritus.				
Prof. LOUGHRIDGE, Emeritus.				
Prof. ANDERSON.				
12. Principles and Methods of High School Agriculture .....	1	1	....	15:....
18. Farm Management and Farm Policies .....	2	....	2	....:34
Prof. JAFFA.				
12. Principles of Nutrition .....	2	2	....	44:....
14. Feeds and Feeding (Nutrition) .....	2	....	2	....:35
16. Composition and Use of Human Foods: Food Adulteration (Nutrition) .....	2	....	2	....:58
21. Laboratory course (Nutrition) .....	2	....	6	....:3
14. Dairy Chemistry (Dairy Industry) .....	2	2	....	26:....
15. Dairy Chemistry: Laboratory .....	2	6	....	1:....
21A-B. Analysis of Soils (Soils) .....	8 or 10	8	5	5:5
31G. Laboratory Research in Agricultural Chemistry (Soils) .....	—	—	—	2:1
Assoc. Prof. WOODWORTH.				
2. General Entomology (Entomology) .....	2	2	....	49:....
3. Classification of Insects (Entomology) .....	2	4	4	7:16
4. Ecology (Entomology) .....	2	....	2	....:46
11. Spraying (Entomology) .....	1	....	2	....:12
16. Economic Entomology .....	2	2	....	3:....
20M. Household Insects .....	2	....	2	....:5
21M. Taxonomy .....	3	By appointment		1:1
22M. Entomology of Linnaeus .....	2	2	....	3:....
30G. Library Work .....	1	1	1	3:6
32G. Department Conference .....	1	1	1	7:6
33G. Special Problems .....	2+	By appointment		4:6
35G. Research Work .....				2:6
Assoc. Prof. SMITH.				
22. Advanced Lectures in Plant Pathology .....	2	2	....	4:....
23A. Advanced Laboratory in Plant Pathology..		By arrangement		2:....
30G. Research Work .....		By arrangement		4:....
Assoc. Prof. SHAW.				
8. Chemistry of Plants (Agriculture) .....	3	3	....	8:....
11. Sugar Technology (Agricultural Industries)	2	....	2	....:5
12. General Agricultural Technology .....	—	—	....	2:....
29. Sugar-house Control .....	2	—	6	:3
20. Experimental Agronomy .....	1	By appointment		5:....
21. Experimental Agronomy .....	—	By appointment		:1
22. Experimental Agronomy .....	1	....	1	....:2

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Assoc. Prof. MAJOR (1st term at University Farm).				
12. Principles of Breeding (Animal Industry)	1	....	1	....:25
14. General Course (Animal Industry)	1	....	1	....:20
Assoc. Prof. BIOLETTI.				
14. Agricultural Industries	2	2	....	22:....
16. Horticulture: Viticulture	2	....	2	....:37
Asst. Prof. COLBY.				
14. Horticulture: Chemistry of Fruits	1	....	1	....:25
21A-B. Soils: Waters and Fertilizers	—	15	15	5:
31G. Soils: Agricultural Chemistry Research	1	1	1	1:1
21. Agricultural Industries: Must-Wine	—	—	....	1:....
23. Agricultural Industries: Adulterations of Fermented and Distilled Liquors	—	....	—	....:1
12. Entomology: Insecticides and Fungicides	1	1	....	10:....
Asst. Prof. QUAYLE.				
Asst. Prof. CLARKE.				
18. Horticulture: Pomology	2	....	2	....:11
Asst. Prof. HARING.				
21. Veterinary Science	2	By appointment		....:2
13. Minor Surgery and Veterinary Clinics	1	....	4	....:7
11. Veterinary Science	2	....	4	....:7
Asst. Prof. BABCOCK.				
10. Agricultural Education: Principles of Elementary School Agriculture	1	1	....	6:....
11. School Gardens	2	....	4	....:11
14. Elements of Agriculture and Horticulture	2	2	....	10:....
Asst. Prof. BURD.				
24. Soils: Chemistry of Fertilizers	1	....	1	....:16
25. Soils: The Investigation of Fertilizers	2	6	....	1:....
Asst. Prof. HERMS.				
1. Entomology: Laboratory Methods	2	6	6	2:—
2. General Entomology	2	2	....	63:....
17. Veterinary Entomology	3	3	....	25:....
27M. Anatomy: Entomology	2	6	....	2:....
33G. Special Problems: Entomology	2+	14	....	8:....
35G. Research Work: Entomology	—	3	....	1:....
Asst. Prof. HORNE.				
21. General Plant Pathology (2nd half-year, 2 sections: 5, 3)	2	2	8	43:8
22. Advanced Lectures in Plant Pathology	1	....	1	....:4
23. Advanced Laboratory in Plant Pathology	3	9	....	2:....
Asst. Prof. MANSELL.				
1. Horticulture: Plant Propagation	2	....	3	....:64
2. Horticulture: Landscape Gardening	1	1	....	53:....
Special Horticulture	—	....	8	....:2
11. Agricultural Education	2	....	3	....:11



## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.		Units	Instructor's hrs.		Students
			1st half	2nd half	
Instr. LEA.					
12.	Nutrition, Principles of .....	2	2	....	44:....
14.	Nutrition: Feeds and Feeding .....	2	....	2	....:35
16.	Nutrition: Food Composition .....	2	....	2	....:58
14.	Dairy Industry: Chemistry .....	2	2	....	26:....
Instr. BENTON.					
13.	Apiculture: Apiary Work .....	1	3	....	5:....
14.	General Apiculture .....	2	2	2	24:16
21M.	Apiculture: Honey and Wax Production...	2	....	4	....:6
23M.	Apiculture: Queen Rearing .....	3	....	7	....:1
33G.	Entomology: Special Problems .....	—	—	—	2:1
35G.	Research Work in Entomology .....	—	—	—	1:2
Instr. HOAGLAND.					
14.	Dairy Chemistry .....	2	By arrangement		1:....
21.	Nutrition: Laboratory Course .....	2	....	Any aft'n	....:2
Principal CLEGHORN, of University Farm School.					
Instr. LIPMAN (see also Hygiene).					
7M.	Soil Bacteriology .....	2	....	6	....:2
2.	Soils .....	2	....	2	....:99
Asst. HOLM.					
15.	Agricultural Industry: Zymology I .....	4	....	10	....:9
16.	Agricultural Industry: Zymological Tech- nology I .....	2	2	....	13:....
18.	Agricultural Industry: Zymological Tech- nology II .....	2	....	2	....:4
33G.	Agricultural Industry: Advanced Zymology	—	1	....	1:....

In addition to the officers named above, there were eighteen assistants, mainly engaged in field work at the outlying experiment stations.

## ANATOMY.

## Asst. Prof. MOODY.

4. Osteology .....	2 $\frac{2}{3}$	8	....	35:....
5. Head and Neck .....	3 $\frac{1}{3}$	....	20	....:25
6. Arm and Thorax .....	3 $\frac{1}{3}$	....	—	....:23
7. Leg and Abdominal Viscera .....	3 $\frac{1}{3}$	....	—	....:28
8. Topographical and Applied Anatomy .....	3 $\frac{1}{3}$	....	—	....:11

## Asst. DAL PIAZ.

1. Histology .....	4	....	12	....:25
2. Microscopic Organology .....	4	....	4	....:25

## Asst. HARVEY.

3. Neurology .....	4	8	....	15:....
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## Asst. STADTMULLER.

## Technical Asst. MILLER

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
mbalmer J. W. C. BEATTIE.				
st. ROBERTSON (Feb. 1-June 30).				
st. RISDON (Jan. 1-June 30).				
st. POWELL (Jan. 1-June 30).				
st. MARTIN (Jan. 1-June 30).				
st. JOHNSON (Jan. 1-June 30).				

## ANTHROPOLOGY.

st. Prof. KROEBER.				
1A-B. General Introduction to Anthropology ....	4	2	2	73:45
3AM-BM. General Descriptive Ethnology .....	4	2	2	9:11
7AG-BG. Advanced Work: Ethnology .....	—	—	—	1:1
9AG-BG. Advanced Work: Archaeology .....	—	—	—	1:1
30M. Types of Languages .....	2	2	—	5:—
31M. North American Languages .....	2	—	2	—:7

rof. BARROWS.				
2B. Peoples of the Philippines .....	3	—	3	—:77

rof. PUTNAM, Emeritus.

useum Asst. NELSON.

## ARCHITECTURE.

rof. HOWARD.				
2M. Planning .....	13	2	2	9:9
3AG-BG. Planning and Composition .....	21	2	2	5:3
4G. Advanced Design .....	15	1	1	3:2
5C-D. History of Mediaeval and Renaissance Architecture .....	2	1	1	97:136
6CM-DM. Theory of Architecture .....	2	1	1	9:9
6EG-FG. Theory of Architecture .....	2	1	1	4:4

st. Prof. HAYS.				
1AM-BM. Elements of Architecture .....	8	3	4	16:17
6AM-BM. Theory of Architecture .....	2	1	1	14:15
9G. Specifications and Working Drawings .....	3	1	—	2:—

str. CUMMINGS.				
14. Modeling .....	2	3	3	13:10

str. SEAWELL.				
12A-B. Water Color .....	2	3	3	23:21
13A-B. Pen and Ink .....	2	3	3	31:23

elper Dod (Aug.-Jan.).

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
ASTRONOMY.				
Prof. LEUSCHNER.				
1BM. Modern Astronomy .....	3	....	3	....:16
6G. Theoretical Astronomy .....	3	....	3	....:3
7M. Method of Least Squares (2 sections: 17, 17) .....	2	7	....	34:....
12G. Theoretical Astronomy .....	3	3	....	3:....
13G. Perturbations and Celestial Mechanics (2nd half-year, 2 sections: 3, 2) .....	3, 2	3	4	5:5
15G. Advanced Study and Research .....	2	....	6	....:1
4AM. Practical Astronomy .....	3	....	7	....:2
Asst. Prof. CRAWFORD.				
1A. Elements of Astronomy .....	2	2	....	160:....
2B. Elements of Spherical Trigonometry and Astronomy .....	1	....	3	....:65
4BM. Practical Astronomy (2nd half-year, 2 sections: 9, 9) .....	4	7	8	19:18
5. History of Astronomy .....	3	....	3	....:189
8M. Introduction to Interpolation .....	2	2	....	2:....
9M. Interpolation .....	2	....	2	....:2
13G. Perturbations and Celestial Mechanics ....	3	3	3	3:3
Honorary Lecturer MCADIE.				
Asst. EINARSSON.				
2B. Elements of Spherical Trigonometry and Astronomy (6 sections) .....	1	....	3	....:65
3AM-BM. General Astronomy .....	3:2	3	2	3:4
4BM. Practical Astronomy (2nd half-year, 2 sections: 8, 9) .....	4	6	6	19:17
7M. Method of Least Squares (1st half-year, 2 sections: 20, 17) .....	1	6	....	37:....
Asst. MEYER.				
2A. Supplement to 1A and 1B (1st half-year, 3 sections: 8, 4, 5; 2nd half-year, 2 sections: 8, 8) .....	2	9	6	17:16
2B. Surveyor's Course (6 sections) .....	1	....	3	....:65
Helper BROWN (1 mo., July-Aug.).				
Clerk McDONALD (Aug. 15 to July 1).				
Asst. Clerk CASTLE (Oct. 15-May 15).				
Clerk OSTEN (Jan. 1-July 1).				
Clerk AITKEN (Jan. 1-July 1).				
Computer BLEY (Dec. 15-Jan. 31).				
Computer STEELE (Dec. 15-Jan. 31).				
Computer STODDARD (Dec. 15-Jan. 31).				
Computer WARNER (Dec. 15-Jan. 31).				
Computer EDDY (Dec. 15-Jan. 31).				
Computer CYKLER (Dec. 15-Jan. 31).				

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
BOTANY.				
Prof. SETCHELL.				
1A-B. Fundamentals of Botany .....	6	3	3	272:303
5AM-BM. General Cryptogamic Botany .....	6	6	6	8:4
6AM-BM. Phycology and Mycology .....	6	6	6	2:2
7AM. Pteridology and Bryology .....	3	6	....	1:....
25G. Advanced Cryptogamic Botany .....	—	By app't	2	3:6
Assoc. Prof. OSTERHOUT.				
Asst. Prof. JEPSON.				
3. General Plant Morphology .....	3	6	....	28:....
4AM-BM. General Phaenogamic Botany .....	6	6	6	13:10
12AM-BM. Morphology of the Compositae .....	6	6	6	2:2
13AM-BM. Taxonomy and Phylogeny of the Phaenogams .....	6	6	6	2:1
26G. Advanced Phaenogamic Botany .....	—	By arrangement		1:0
Asst. Prof. HALL.				
14. Economic Botany .....	3	6	....	14:....
28. Advanced Economic Botany .....	2	....	2	....:4
Honorary Curator BRANDEGEE.				
Botanical Collector PURPUS.				
Asst. Prof. GARDNER.				
2. General Plant Physiology .....	3	....	6	....:49
9AM-BM. Vegetable Histology .....	6	6	6	10:10
11AM-BM. Vegetable Cytology .....	6	6	6	1:1
Asst. GOODSPEED.				
Reader CLARKE (Aug. 1-May 1).				
CHEMISTRY.				
Prof. O'NEILL.				
1C-D. Elements of Chemistry .....	4	2	2	98:180
14AM. Chemical Technology .....	2	....	2	....:12
14BM. Chemical Technology: Laboratory .....	2	....	6	....:10
27M. History of Chemistry .....	2	2	—	11:—
30AM-BM. Special Undergraduate Study and Research .....	—	By appointment		2:....
31G. Graduate Work .....	—	By appointment		2:3
Prof. RISING, Emeritus (died, Feb. 9, 1910).				
Asst. Prof. BLASDALE.				
5A. Laboratory: Quantitative Analysis .....	3	7	....	16:....
5B. Laboratory: Quantitative Analysis (2 sec- tions: 33, 35) .....	3	7	....	68:....
6. Quantitative Analysis (2 sections: 24, 37)..	3	....	7	....:61
7AM-BM. Chemistry of the Metals .....	4	2	2	27:16
16M. Ore Analysis .....	2	....	3	....:7
30AM-BM. Special Undergraduate Study and Research .....	—	6	1	4:3

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. Prof. BIDDLE.				
8A-B. Organic Chemistry .....	4	2	2	90:65
9AM-BM. Organic Chemistry .....	6	3	3	10:10
10AM. Laboratory: Organic .....	3	9	9	22:11
10BM. Laboratory: Organic .....	2 to 5	6	6	7:10
30BM. Undergraduate Special Study .....	—	....	....	4:4
31G. Graduate Course .....	—	....	....	2:4
32G. Thesis Work in Chemistry .....	—	....	—	....:2
Asst. Prof. MORGAN.				
1A-B. General Inorganic Chemistry (1st half-year, 2 sections: 193, 205; 2nd half-year, 2 sections: 127, 176) .....	6	6	6	398:303
3A-B. Qualitative Analysis: Laboratory .....	4	4	4	107:75
18M. Advanced Inorganic Chemistry .....	—	....	1	....:9
28AM-BM. Teacher's Course .....	6	9	9	8:7
31G. Graduate Course .....	—	....	....	2:1
Asst. Prof. COTTRELL.				
11AM-BM. Physical Chemistry .....	4	2	2	10:8
11CM. Electrochemistry .....	3	3	....	8:....
12AM. Laboratory: Physical Chemistry .....	3	....	9	....:6
12BM. Laboratory: Electrochemistry .....	2 or 3	....	....	....:1
30AM-BM. Special Undergraduate Study .....	—	2	2	4:4
31G. Graduate Course .....	—	By appointment		2:3
Asst. Prof. BOOTH.				
3A-B. Laboratory: Qualitative Analysis (1st half-year, 3 sections: 75, 81, 88; 2nd half-year, 3 sections: 60, 74, 63) .....	4	12	12	244:197
15M. Sanitary Chemistry .....	2	....	2	....:18
17AM. Chemistry of Structural Materials .....	2	2	....	26:....
Asst. PRACY.				
Asst. MCCHARLES.				

## CIVIL ENGINEERING.

Prof. DERLETH.				
7C-D. Framed Structures .....	6	5	5	33:31
8A. Strength of Materials .....	2	2	....	53:....
8A. Strength of Materials .....	3	....	3	....:50
19. Thesis .....	4	By appointment		6:7
20AG-BG. Framed Structures .....	6	2	2	16:14
Prof. SOULE.				
Prof. HYDE.				
6. Highway Engineering .....	1	1	....	2:....
9. Sanitary Plumbing .....	2	2	....	11:....
9A. Drainage and Sewerage Engineering .....	2	2	....	6:....
9B. Sewage and Sewage Disposal .....	1	1	....	6:....



## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
10. Hydraulics .....	3	2	—	45:—
11A. Water Supply Engineering .....	2	....	2	....:13
11B. Character and Sanitation of Water Supplies .....	1	....	1	....:5
12. Dams of Timber, Stone, or Earth .....	2	2	....	29:....
16. Engineering Contracts and Specifications ..	1	....	1	....:13
19. Thesis .....	4	By appointment		8:8
26. Applied Sanitary Science and Municipal and State Sanitation .....	2	....	2	....:7
soc. Prof. SEARS.				
1A-B. Surveying Theory (2nd half-year, 2 sections: 42, 36) .....	4	2	4	44:78
2A. Railway, Highway, and Canal Surveying ..	2	2	....	48:....
2B. Railway Field Practice .....	2	6	....	45:....
2C. Railroad Engineering Office Practice .....	1	....	3	....:26
4. Railroad Economics .....	2	....	2	....:28
17. Railway Track and Signals .....	2	2	....	9:....
st. Prof. TIBBETTS.				
1A-B. Surveying Theory .....	4	2	2	21:18
8A. Strength of Materials (1st half-year, 2 sections: 46, 52) .....	3	6	....	98:....
15. Fire Proofing .....	1	1	....	48:....
7A. Framed Structures .....	3	....	3	....:47
13. Foundation of Structures .....	2	....	2	....:36
14. Masonry Structures .....	2	....	2	....:10
str. ALVAREZ.				
1A-B. Surveying Theory .....	4	2	2	53:35
1C-D. Field Practice and Mapping (2nd half-year, 2 sections: 42, 21) .....	1	2	2	77:63
8B. Civil Engineering Laboratory (2 sections: 21, 22) .....	1	....	3	....:43
8C. Civil Engineering Laboratory (2 sections: 12, 12) .....	2	6	....	24:....
8D. Materials of Engineering Construction .....	3	....	3	....:85
19. Thesis .....	—	—	—	—:—
str. KESNER.				
1A-B. Surveying Theory (1st half-year, 2 sections: 57, 26; 2nd half-year, 3 sections: —, —, —) .....	4	4	6	83:44
1C-D. Field Practice and Mapping (1st half-year, 6 sections: 51, 39, 33, 26, 35, 44; 2nd half-year, 2 sections: 54, 35) .....	2	12	4	228:89
5. Higher Surveying .....	2	—	2	—:20
st. FOSTER.				
st. TORPEN.				
1A-B. Surveying Theory .....	4	2	2	30:42
1C-D. Field Practice and Mapping .....	2	2	2	8:27

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. LEIGHTON (Academic year).				
Expert Mechanic ARNTZEN.				
Asst. G. A. HUNT.				
Helper CYKLER (second half-year).				
Helper LEWIS (second half-year).				
Helper BAILEY (second half-year).				
Asst. LANG (Jan. 1-July 15).				

## DRAWING.

Assoc. Prof. KOWER.				
2A-B. Descriptive Geometry .....	4	6	6	51:55
5M. Graphostatics .....	2	....	2	....:27
7AM-BM. Construction .....	4	6	6	13:15
10M. Stereotomy .....	2	6	....	4:....
Instr. JUDSON.				
B. Elementary Freehand Drawing (3 sections: 27, 32, 5) .....	1	....	18	....:64
14AM. Advanced Work in Freehand Drawing (3 sections: 26, 28, 10) .....	2	18	....	64:....
Instr. WYTHE.				
2A-B. Descriptive Geometry (1st half-year, 2 sections: 52, 50; 2nd half-year, 2 sections: 33, 45) .....	4	12	12	102:78
5M. Graphostatics .....	2	....	2	....:62
9. Freehand Lettering and Round Writing (2 sections: 13, 10) .....	1	....	6	....:23
Instr. MONGES.				
C-D. Instrumental Drawing .....	2	3	3	60:40
2A-B. Descriptive Geometry .....	4	6	6	50:30
5M. Graphostatics (2 sections: 20, 35) .....	2	....	6	....:55
9. Freehand Lettering and Round Writing .....	1	3	3	2:10
Asst. NEUHAUS.				
A-B. Elementary Freehand Drawing (1st half- year, 4 sections: 22, 25, 19, 23; 2nd half- year, 4 sections: 9, 22, 5, 17) .....	2	12	12	89:53

## ECONOMICS.

Prof. MILLER (absent on leave second half-year).				
2. Principles of Economics .....	3	3	....	130:....
7M. Modern Industrialism .....	3	3	....	16:....
26AG-BG. Seminary in Economics .....	1	1	....	4:....
45M. Advanced Economics .....	3	3	....	5:....
Prof. PLEHN (absent on leave).				

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Prof. HATFIELD.				
14. Introduction to Accounting .....	3	3	....	69:....
14X. Introduction to Accounting .....	—	—	....	20:....
14AM. The Investment Market .....	3	3	....	14:....
14BM. Advanced Accounting .....	3	....	3	19:....
14DM. Auditing .....	1	1	....	4:....
14EM. Cost Accounting .....	2	....	2	....:7
8AM. Banking Practice .....	2	2	....	18:....
27A-B. Commercial Reviews and Trade Journals	2	1	1	34:29
15M. Financial Policy of the United States .....	3	....	3	....:24
Thesis Work .....	—	By appointment		....:1
Prof. MITCHELL.				
1A-B. Introduction to Economics .....	6	3	3	149:118
8. Theory and History of Banking .....	3	....	3	....:69
8BM. Money .....	3	3	....	20:....
8CM. Foreign Exchange .....	2	....	2	....:10
25. Economic Crises and Depressions .....	2	2	....	12:....
Asst. Prof. HUTCHINSON.				
3A. Introduction to Economic Geography .....	3	....	4	....:104
3B. Materials of Commerce .....	3	3	....	29:....
6A. History of International Trade .....	2	2	....	33:....
26AG-BG. Seminary in Economics .....	—	1	1	2:2
30M. Foreign Trade .....	2	....	2	....:14
31M. Consular Service .....	2	2	....	10:....
38G. Commercial Resources of the Spanish-American Countries .....	1	....	1	....:1
Asst. Prof. PEIXOTTO.				
B. Lectures on Contemporary Social Problems	$\frac{1}{2}$	1	1	25:—
18M. Poverty .....	3	3	....	27:....
19M. Care of Dependents .....	3	....	3	....:18
42M. Contemporary Theories of Social Reform	3	3	....	16:....
43M. History of Social Reform Movements .....	3	....	3	....:9
50M. The Child and the State .....	2	2	....	10:....
51M. Crime as a Social Problem .....	2	....	2	....:60
52M. The Household as an Economic Agent ....	2	2	....	27:....
Asst. Prof. WHITNEY (see also Mathematics).				
11A. Insurance .....	3	3	....	41:....
11BM. Actuarial Science .....	3	....	3	....:4
11D. Fire Insurance .....	2	....	1	....:19
10AM. Statistics .....	3	....	4	....:16
Asst. Prof. DAGGETT.				
2. Principles of Economics .....	3	....	3	....:99
9M. Introduction to Public Finance .....	3	3	....	13:....
6BM. History of Tariff Legislation in U. S. ....	2	2	....	13:....
16AM. Railroad Economics .....	3	3	....	17:....
16BM. Railway Finance .....	3	....	3	....:10
17M. Railroad Regulation .....	2	....	2	....:8

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Reader ENGLISH (Aug. 16-May 16).				
Reader GIAMBONI (Aug. 16-May 16).				
Asst. SCOTTFORD.				
28. Advertising .....	1	....	1	....:73

## EDUCATION.

Prof. LANGE.				
5AM-BM. Theory of Education .....	3	3	—	27:45
12. Schools of California .....	1	1	....	12:....
15G. Special Investigation .....	—	....	—	....:2
18AG. Language and Literature in Secondary Schools .....	3	3	....	19:....
Hon. Prof. BROWN.				
Prof. BARROWS (see also Anthropology 2B.)				
2G. School Supervision .....	1	....	1	....:4
17M. Selected Topics in Education .....	3	....	3	....:15
Asst. Prof. THOMAS.				
3BM. History of Education .....	3	3	*	58:....
21M. The High School .....	3	3	*	45:....
Asst. Prof. RUGH.				
1G. Practice of Teaching .....	8	4	4	37:44
26G. Introduction to Educational Method .....	4	2	2	42:37
27M. Moral Training .....	2	....	2	....:76
Lectr. BOONE.				
3BM. History of Education .....	3	....	3	....:64
7G. Educational Seminar .....	4	2	2	10:22
10M. Psychological Basis of Secondary Education .....	3	....	3	....:21
16M. Selected Topics in the Theory and Practice of Secondary Education .....	3	3	....	19:....
25M. History of American Education .....	3	3	....	62:....
Lectr. HEATON.				
22AG-BG. The Art of Class Teaching .....	4	2	2	10:6
Hon. Lecturer SWETT.				
Reader MARSHALL (Sept. 1-July 1).				
Stenographer HUEBNER (Sept. 1-Jan. 1).				
Asst. HUTTON (Jan. 1-July 1).				

\* Absent visiting schools 2nd half-year.

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
ENGLISH.				
Prof. GAYLEY.				
4D-E. Great Books .....	2	1	1	326:293
17CM. Shakespeare Seminar .....	2	....	2	....:122
17EM. Stuart Dramatists .....	3	....	3	....:26
21BM. History of Poetry from 1850 .....	3	3	....	94:....
21DM. Seminar in Victorian Poetry .....	2	2	....	24:....
40AG-BG. History of Aesthetic .....	4	2	2	12:11
Prof. BRADLEY.				
14AM. History of the English Language (2 sec- tions: 38, 15) .....	3	6	....	53:....
14BM. Introduction to English Grammar .....	3	....	3	....:7
18AM. Milton .....	3	3	....	14:....
21CM. Tennyson .....	3	....	3	....:12
23AM. Arnold .....	3	....	3	....:11
32AG-BG. English Essay .....	4	2	2	8:4
50AG-BG. Special Study .....	2	2	1	2:1
Assoc. Prof. ARMES.				
2A. From Beginnings to Death of Spenser (2 sections: 24, 20) .....	3	6	....	44:....
2B. From Death of Spenser to 19th Century (2 sections: 29, 24) .....	3	....	6	....:53
20. The Revival of the English Drama .....	3	3	....	6:....
22AM. History of American Literature .....	3	3	....	50:....
22BM. American Authors .....	3	....	3	....:25
49G. Development of California Literature .....	3	....	3	....:8
Assoc. Prof. WELLS.				
1A. Narration and Description (2 sections: 41, 38) .....	3	6	....	79:....
1B. Exposition (2 sections: 42, 42) .....	3	....	6	....:84
6EM. Essay Writing .....	3	3	....	22:....
9CM. Theory of Fiction .....	3	....	3	....:34
8BM. Advanced Narration .....	2	....	2	....:12
50BG. Special Study .....	—	....	—	....:3
Asst. Prof. SANFORD.				
2A. From Beginnings to Death of Spenser (2 sections: 83, 38) .....	3	6	....	121:....
2B. Death of Spenser to 19th Century (2 sec- tions: 71, 34) .....	3	....	6	....:105
15AM. History of Poetry, 1558-1660 .....	3	3	....	65:....
15BM. Spenser .....	3	....	3	....:38
44AG-BG. Seminar in Romantic Movement .....	6	3	3	10:10
Asst. Prof. FLAHERTY.				
1C. Exercises in the Art of Discourse .....	3	3	....	48:....
1D. Exercises in the Art of Discourse .....	3	....	3	....:41
3A-B. Foundations of Argumentative Writing....	4	2	3	50:42
7AM. Oral Argumentation and Debate .....	2	3	....	33:....
7BM. Forensics .....	2	....	3	....:21



## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. Prof. HART (absent on leave).				
Asst. Prof. SPRAGUE (absent on leave).				
Asst. Prof. KURTZ.				
1A. Narration and Description (2 sections: 39, 40) .....	3	10	....	79:....
1B. Exposition (2 sections: 46, 44) .....	3	....	6	....:90
2A-B. General History of English Literature ....	6	3	3	40:30
9AM. Theory of Poetry .....	3	3	....	69:....
9BM. Problems of Literary Criticism .....	3	....	3	....:95
Instr. VON NEUMAYER.				
3C. Principles of Vocal Expression (3 sections: 43, 43, 20) .....	2	6	....	106:....
3E. Elementary Oratory .....	2	2	....	16:....
3D. Principles of Vocal Expression (3 sections: 20, 37, 21) .....	2	....	6	....:78
3F. Elementary Oratory .....	2	....	2	....:10
7DM. Public Speaking .....	2	2	....	17:....
7EM. Public Speaking .....	2	....	2	....:18
7FM. Oral Interpretation .....	2	2	....	19:....
7HM. Oral Interpretation .....	2	....	2	....:15
54G. Methods of Oral Presentation .....	1	1	....	16:....
Instr. SMITHSON.				
1A-B. Narration and Description: Exposition (1st half-year, 2 sections: 46, 41; 2nd half-year, 2 sections: 45, 51) .....	6	6	6	87:96
5B. English Masterpieces .....	3	....	3	....:74
11AM. Old English .....	3	3	....	42:....
12AM. Beowulf .....	3	....	3	....:22
13AM. Middle English .....	3	3	....	20:....
Instr. BLANCHARD.				
1A-B. Narration, Description: Exposition (1st half-year, 2 sections: 38, 36) .....	6	6	6	74:72
5A. Practical Composition .....	3	3	....	45:....
6B. Rapid Writing .....	2	....	2	....:18
Instr. CORY.				
1A-B. Narration, Description: Exposition (1st half-year, 2 sections: 41, 42; 2nd half-year, 2 sections: 46, 43) .....	6	6	6	73:79
25. The English Epic .....	2	2	....	11:....
Instr. TORREY.				
1A-B. Narration, Description: Exposition .....	6	3	3	38:25
Reader BRUCE (Aug. 1-June 1).				
Reader FIELDS (Aug. 1-June 1).				
Reader HARRISON (Aug. 1-June 1).				
Reader THOMAS, Jr. (Aug. 1-June 1).				

STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	

Reader DAY (Aug. 1-June 1).

Reader BARNHART (Aug. 1-June 1).

Reader DENTON (Aug. 1-June 1).

Reader BROOKS (Aug. 1-June 1).

GENERAL SCIENCE.

1. General Science .....	3	3	3	194:305
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Prof. HASKELL.

Prof. LEUSCHNER.

Prof. LOEB.

Prof. MORGAN.

GEOGRAPHY.

Asst. Prof. HOLWAY (absent on leave).

Prof. DAVIDSON, Emeritus.

Asst. Prof. HUTCHINSON (see also Economics).

Asst. Prof. SMITH (see also History).

Instr. LINSLEY.

7. General Physical Geography .....	3	3	....	87:....
10. Physiography of the Lands .....	3	3	....	25:....
10A. Interpretation of Topographic Maps .....	3	—	....	4:....
11. Common Rocks and Minerals .....	2	6	....	4:....
12A. Meteorology .....	2	....	2	....:125
12B. General Climatology .....	2	2	....	32:....
16M. Physiography of North America .....	3	....	3	....:20
20G. The Teaching of Physical Geography .....	2	....	6	....:8
21G. Special Problems .....	4	2	2	3:4
43M. Glacial Geography of North America .....	2	....	2	....:16

GEOLOGY.

Prof. LAWSON (see also Mineralogy).

1A. General Geology .....	3	3	....	184:....
2AM-BM. Field Geology .....	2	—	—	36:38
2CM. Economic Geology .....	3	....	3	....:53
2DM. Economic Geology .....	2	2	....	21:....
3M. Petrography .....	2	....	2	....:39
7M. Physical Geology of North America .....	2	....	2	....:35
10G. Inorganic Geology .....	—	—	—	3:3
12AM-BM. Undergraduate Thesis Course .....	4	By appointment		3:3

Assoc. Prof. MERRIAM.

1B. General Geology .....	2	....	2	....:45
5AM. Invertebrate Palaeontology .....	2	4	....	3:....
5. General Palaeontology .....	2	2	....	35:....
6AM. Practical Work in Palaeontological Geol- ogy .....	2	....	4	....:8
8AG-BG. Advanced Palaeontological Laboratory .....	—	10	10	7:9
8. Geology .....	—	....	—	....:15
11M. Vertebrate Palaeontology .....	3	5	5	5:5

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Assoc. Prof. LOUDERBACK.				
2A-B. Field Geology .....	2	Alternate Saturdays		35:34
4M. Petrographical Laboratory (Special) .....	—	....	—	....:3
9G. Geology of California .....	2	2	....	5:....
12AM-BM. Undergraduate Thesis Course .....	4	By appointment		2:2
13. Elementary Petrographical Laboratory (1st half-year, 2 sections: 16, 15) .....	—	12	6	31:19
Instr. WOOD (see also Mineralogy).				
1B. Mineralogical Laboratory .....	—	....	—	....:54
4M. Petrographical Laboratory (1st half-year, 2 sections: 13, 16; 2nd half-year, 2 sections: 13, 14) .....	3:2	12	6	29:27
Asst. ICKES (see also Mineralogy).				
4M. Petrographical Laboratory (2 sections: 14, 15) .....	—	6	....	29:....
Asst. SEARLS (see also Mineralogy).				
Laboratory Asst. FURLONG.				
Stenographer JONES.				
Stenographer HAIR.				
Asst. HEINDL.				
Asst. NASH.				

## GERMAN.

Prof. SCHILLING.				
1M. Germanic Philology: Gothic .....	3	3	....	2:....
3G. Introduction to Germanic Philology .....	1	1	....	3:....
9A-B. Outlines of History of German Literature .....	2	1	1	8:8
18AM-BM. General History of German Literature .....	6	3	3	40:33
30AM-BM. The German Drama of the Present Day .....	4	2	2	8:7
21BM. The Teaching of German .....	1	....	1	....:13
50AG-BG. Germanic Seminar .....	2	1	1	4:4
Prof. PUTZKER, Lecturer.				
10AM-BM. The Modern German Ballad .....	2	1	1	28:30
27AM. Heinrich von Kleist .....	3	3	....	14:....
27BM. Theodor Körner .....	3	....	3	....:21
Assoc. Prof. SENGEL (absent on leave).				
Asst. Prof. DEMETER.				
A-B. Elementary German .....	6	3	3	27:30
6CM-DM. Grammar, Composition, and Conversation .....	4	2	2	29:25
6EM-FM. Composition .....	4	7½	6½	24:18
21AM. German Phonology and Orthography ....	1	1	....	19:....
25AM-BM. The Romantic School .....	6	3	3	3:4
46AG-BG. The Works of Hebbel .....	2	1	1	3:2

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Instr. PASCHALL.				
AB. Elementary German .....	5	....	5	....:43
C-D. Modern Stories and Plays .....	6	3	3	43:43
6AM-BM. Grammar, Composition, Conversation..	4	2	2	43:43
8AM-BM. Classics of the 18th Century: Goethe..	6	3	3	30:22
19AM. Middle High German .....	3	3	....	22:....
Instr. PINGER.				
AB-CD. Elementary German .....	10	5	5	30:29
3A-B. German Prose .....	6	3	3	35:27
4AM-BM. Classics of the 18th Century .....	6	3	3	59:42
11AM-BM. Novelists of the 19th Century .....	4	2	2	38:35
Instr. WINTHER.				
A-B. Elementary German .....	6	3	3	26:25
C-D. Modern Stories and Plays (1st half-year, 2 sections: 34, 19; 2nd half-year, 2 sec- tions: 26, 19) .....	6	6	6	53:45
5AM-BM. Classics of the 18th Century .....	6	3	3	19:12
28AM-BM. German Thought in 19th Century as reflected in the Arts .....	4	2	2	6:7
Asst. WYNEKEN.				
A-B. Elementary German .....	6	3	3	38:29
C-D. Modern Stories and Plays .....	6	3	3	41:33
6AM-BM. German, Composition, Conversation...	4	2	2	29:20
Asst. BELL.				
A-B. Elementary German .....	6	3	3	33:25
C-D. Modern Stories and Plays .....	6	3	3	37:35
Asst. WOLFF.				
Reader TORR (Aug.-Jan.).				
Reader SCHNEIDER (Aug.-June).				
Reader SCHRAIDT (Jan.-June).				
GREEK.				
Prof. CLAPP.				
1. Homer's Odyssey (2 sections: 7, 14) .....	3	6	....	21:....
2. Plato's Apology, Crito and Selections .....	3	....	3	....:20
7. Introduction to Greek Tragedy .....	3	3	....	12:....
9. Thucydides .....	3	....	3	....:6
21M. The Oedipus Tyrannus and the Antigone of Sophocles .....	2	....	2	....:8
41A. Greek Poetry .....	1	1	....	15:....
41B. Greek Prose Literature .....	1	....	1	....:14
Asst. Prof. ALLEN.				
2. Plato's Apology, Crito and Selections .....	3	....	3	....:5
17. Sight Reading .....	2	2	....	4:....
33M. Plato's Phaedo .....	2	2	....	6:....
55B. Ancient Dramatic Art .....	2	2	....	3:....
57AG-BG. Greek Seminary .....	8	4	4	6:5

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Student
		1st half	2nd half	
Asst. Prof. WASHBURN (see also Latin).				
AA-BB. Greek for Beginners .....	6	3	3	7:5
40. History of Greek Art .....	2	---	2	....:47
47. Greek Gods and Heroes .....	1	1	---	10:....
Instr. LINFORTH.				
A-B. Beginner's Greek .....	6	3	3	23:16
C-D. Xenophon's Memorabilia .....	6	3	3	31:27
3. Greek Composition I .....	1	1	---	13:....
4. Greek Composition II .....	1	---	1	....:10
5M. Greek Composition III .....	1	1	---	5:....
6M. Greek Composition IV .....	1	---	1	....:6
23M. Demosthenes: Oration on the Crown .....	2	---	2	....:7
37M. Aristophanes .....	2	2	---	4:....
Assoc. Prof. OVERSTREET (see also Philosophy).				
Asst. Prof. SCHOLZ (see also History).				
Reader SMITH (Aug.-June).				
HISTORY.				
Prof. STEPHENS (absent on leave).				
Prof. MOSES (see Political Science).				
Prof. BACON.				
56A-B. French Revolution .....	6	3	3	41:27
57M. Europe in the 19th Century .....	2	2	---	20:....
87AM-BM. Renaissance and Reformation .....	3	3	3	17:6
Asst. Prof. BOWMAN.				
64A-B. History of the Middle Ages .....	3	3	3	156:12
95AM-BM. Holy Roman Empire: Papacy during Middle Ages .....	3	3	3	13:23
108AG-BG. Seminary in Medieval History .....	4	2	2	6:4
109G. Middle Ages .....	3	---	3	....:9
Asst. Prof. SCHOLZ (see also Music 4).				
53AM-BM. Ancient History. Greece: Rome ....	6	3	3	72:57
54AM-BM. Roman Empire: Greek Civilization....	4	2	2	6:29
107CD-DG. Seminary in Ancient History .....	4	2	2	—:2
Instr. MCCORMAC.				
70AM-BM. American History to 1850 .....	3	3	3	72:67
70AM-BM. American History to 1850 .....	3	3	3	72:67
71M. History of U. S. from 1850-1869 .....	3	3	---	21:....
86M. Diplomatic History of the U. S. ....	3	---	3	....:8
92AG-BG. Investigation in History of U. S. ....	4	2	2	8:12
104G. The Teaching of History .....	2	---	2	....:8
Asst. Prof. SMITH.				
63AM-BM. Modern European History .....	6	3	3	46:39
65A-B. Historical Geography .....	6	3	3	126:29
111A-B. History of Spain: Mexico .....	4	2	2	31:62
116AG-BG. Seminary in Spanish History .....	4	2	2	7:6



STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Instr. NEWELL.				
52A-B. History of England .....	6	3	3	287:255
52AM-BM. History of England .....	—	—	—	8:6
59AM-BM. Constitutional History of England....	4	2	2	5:6
108JG-KG. Seminary in English History .....	4	2	2	—:2

Teaching Fellow WOODWARD.

Reader VAN HEMERT-ENGERT.

Reader CUNNINGHAM.

Reader OUTCALT.

Reader EDWARDS.

HYGIENE.

Prof. REINHARDT (absent on leave 2nd half-year).				
General Hygiene (2 sections: 294, 314) .....	2	4	....	608:....

Honorary Prof. GREENLEAF.

Asst. Prof. WARD.				
4M. Bacteriology of Infectious Diseases .....	3	....	9	....:3
5M. Bacteriology of Market Milk .....	2	—	....	—:....
8M. Advanced Bacteriology .....	—	By appointment		2:1

Lectr. BANCROFT.

1. General Hygiene .....	2	2	....	365:....
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Acting Lectr. HOAG (From Jan. 1, 1910).

1A. School Hygiene .....	2	....	2	....:70
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Medical Examiner SAWYER.

Instr. HENDERSON.				
2. Elementary Bacteriology .....	3	9	....	19:....
3M. Bacteriology of Water and Sewage .....	2	6	....	1:....
4M. Bacteriology of Infectious Diseases .....				
6M. Medical Bacteriology .....	4	....	12	....:17

Instr. BURNETT (see Physiology).

Asst. VAN ORDEN, in State Hygienic Laboratory.

Superintendent SHERMAN, of the Infirmary.

Stenographer CLARK.

Reader HAWK (1 year).

Reader READ (1 year).

Asst. CLAYBOUGH (Jan. 1-).

IRRIGATION.

Asst. Prof. ETCHEVERRY.				
2. Irrigation Engineering .....	3	....	3	....:35
2A. Irrigation Design .....	2	6	....	17:....
2B. Irrigation Design .....	2	....	6	....:6
5. Agricultural Hydraulics .....	3	....	3	....:24
5A-B. Irrigation Drawing .....	1	3	3	1:2
4. Drainage .....	2	2	....	23:....

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Prof. MEAD (absent on leave).				
Lectr. CHANDLER.				
1. Irrigation Institutions and Economics .....	3	....	3	....:78
3. Water Supply for Irrigation .....	2	2	....	87:....

## JURISPRUDENCE.

Prof. JONES.				
1M. Formation of the Federal Constitution .....	2	2	2	9:18
2AG-BG. Constitutional Law .....	6	3	3	25:20
5M. Roman Law .....	3	3	....	40:....
9M. School Legislation in California .....	2	....	2	....:9
12AM-BM. The Law of Torts .....	2:3	2	3	42:34
Prof. BOKE.				
15AM-BM. The Law of Contracts .....	6	3	3	40:30
25G. Law of Corporations .....	4	....	4	....:16
27G. Law of Trusts .....	4	4	....	22:....
Prof. McMURRAY.				
11AM-BM. The Law of Property .....	6	3	3	33:30
19M. Common Law Procedure .....	1	1	....	37:....
20M. Agency .....	3	....	3	....:43
29G. Code Procedure .....	2	2	....	27:....
33AG-BG. Practice .....	4	2	2	24:15
Hon. Prof. LINDLEY.				
Asst. Prof. KIDD.				
13M. Criminal Law and Procedure .....	4	4	....	32:....
18A-B. Commercial Law .....	4	2	2	119:99
21AG-BG. The Law of Evidence .....	4	2	2	21:15
Lectr. OLNEY (absent on leave).				
Lectr. JACOBS.				
32AG-BG. Law of Insurance .....	2	1	1	9:6
Lectr. THELEN.				
3AM-BM. Principles of International Law .....	4	2	2	51:44
Lectr. TASHEIRA.				
30BG. Negotiable Instruments .....	2	....	2	....:9
Lectr. WHITE.				
10A-B. Elementary Law and Jurisprudence ....	4	2	2	66:59

## LATIN.

Prof. MERRILL.				
19M. Patristic Latin .....	3	3	....	16:....
21M. Elementary Roman Law .....	3	3	....	3:....
23M. Tacitus, Suetonius .....	3	....	3	....:15
24M. Early Latin .....	2	....	2	....:12
34AG-BG. Latin Seminary .....	6	3	3	10:10
81M. Select Titles from the Digest .....	3	....	1	....:1

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Assoc. Prof. RICHARDSON.				
1B. Sight Translation I .....	1	2	2	8:5
5. Horace and Virgil .....	3	3	....	17:....
5B. Sight Translation II .....	1	2	2	8:12
8. Cicero, Letters; Roman Literature .....	3	....	3	....:19
12AM-BM. Latin Composition III .....	2	1	1	4:6
16M. Ovid; Propertius .....	3	3	....	22:....
30AG-BG. Latin Verse Composition .....	2	1	1	2:1
35. Teacher's Training Course .....	3	....	3	....:13
Asst. Prof. PRICE.				
1. Cicero and Pliny (2 sections: 18, 30) .....	3	6	....	48:....
2. Livy and Plautus (2 sections: 28, 16) .....	3	....	6	....:44
5. Horace and Virgil .....	3	3	....	20:....
10. Horace, Satires and Epistles .....	2	....	2	....:8
41M. Palaeography and Text Criticisms .....	3	....	3	....:7
60AG-BG. Roman Epigraphy .....	6	3	3	11:7
Asst. Prof. NUTTING.				
A. Virgil's Aeneid .....	3	....	3	....:40
B. Cicero's Orations .....	3	3	....	22:....
3A-B. Latin Composition I (1st half-year, 3 sections: —, —, —; 2nd half-year, 3 sections: 13, 7, 11) .....	2	3	3	35:31
18AM. Tacitus: Histories .....	3	....	3	....:11
40AM. Syntax of the Noun .....	2	2	....	9:....
40BM. Syntax of the Verb .....	2	....	2	....:2
51M. Cicero: Tusculan Disputations .....	3	3	....	3:....
85G. Advanced Latin Composition .....	1	1	1	12:10
Asst. Prof. WASHBURN (see also Greek).				
A. Virgil's Aeneid .....	3	....	3	....:20
B. Cicero's Orations .....	3	3	....	38:....
53M. Roman Private Life .....	2	2	....	40:....
54M. Ancient Rome .....	2	....	2	....:18
89. Introduction to Classical Archaeology .....	3	3	....	5:....
92. Pompeii .....	1	1	....	4:....
93M. Virgil from the Monuments .....	3	....	3	....:18
Instr. PETERSSON.				
4A-B. Latin Composition II (1st half-year, 2 sections; —, —; 2nd half-year, 2 sections: 16, 10) .....	2	2	2	27:26
5. Horace and Virgil .....	3	....	3	....:8
9. Catullus; Ovid .....	2	2	....	3:....
22B-M. Masterpieces of Roman Literature (2 sections: 4, 10) .....	2	2	....	14:....
25BM. Lucretius: De Rerum Natura .....	3	3	....	9:....
39AM. Roman Comedy .....	3	....	3	....:21
91M. Cicero .....	3	....	3	....:4

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Student
		1st half	2nd half	
Instr. DEUTSCH.				
A. Virgil's Aeneid .....	3	....	3	....:42
B. Cicero's Orations .....	3	3	....	36:....
1. Cicero and Pliny .....	3	3	3	29:8
C. Latin Composition .....	2	2	2	10:8
2. Livy and Plautus .....	3	3	3	6:15

Asst. PHILLIPS (Sept. 1-May 1).

Asst. PENCE (Sept. 1-May 1).

## MATHEMATICS.

Prof. STRINGHAM (died Oct. 5, 1909).

Prof. HASKELL.

9A. Differential Calculus .....	3	3	....	22:....
9BM. Integral Calculus .....	3	....	3	....:14
11M. Determinants and Theory of Numerical Equations .....	3	3	....	25:....
18AG-BG. Logic of Mathematics .....	6	3	3	17:13
32G. Theory of Algebraic Equations .....	3	3	....	5:....
33G. Seminary in Theory of Equations .....	3	....	3	....:4
40G. Seminary; all members of the department coöperating .....	2	....	2	....:5

Assoc. Prof. EDWARDS.

C. Plane Trigonometry .....	2	....	2	....:42
D. Plane Analytic Geometry .....	2	2	....	39:....
3A-B. Elements of Analysis .....	6	3	3	40:36
4A-B. Elements of Analysis .....	6	3	3	29:22
10AM-BM. Advanced Calculus .....	4	2	2	11:9

Asst. Prof. NOBLE.

C. Plane Trigonometry .....	2	....	2	....:27
3A-B. Elements of Analysis .....	6	3	3	37:36
4A-B. Elements of Analysis .....	6	3	3	40:38
19M. Theory of Differential Equations .....	3	3	....	5:....
23G. Partial Differential Equations .....	3	....	3	....:8
24G. Theory of Functions of Complex Variable .....	3	3	....	5:....

Asst. Prof. WHITNEY.

C. Plane Trigonometry .....	2	2	....	48:....
B. Solid and Spherical Geometry .....	2	2	....	28:....
2C-D. Elements of Analysis .....	4	2	2	57:48
20A. Theory of Probabilities .....	3	3	....	8:....

Asst. Prof. LEHMER.

E. Introduction to Projective Geometry .....	2	....	2	....:40
1A. Elements of Analysis (2 sections: 101, 34) .....	3	6	....	135:....
9A. Differential Calculus .....	3	....	3	....:23
14M. Higher Plane Curves .....	3	3	....	6:....
13M. Synthetic Projective Geometry .....	3	3	3	8:5
15M. Theory of Numbers .....	3	....	3	....:12

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. Prof. PUTNAM.				
2A-B. Plane Trigonometry, Analytic Geometry..	4	2	2	43:43
3A-B. Elements of Analysis .....	6	3	3	37:32
4A-B. Elements of Analysis .....	6	3	3	39:42
28AG-BG. Analytic Projective Geometry .....	6	3	3	5:3
Asst. Prof. McDONALD (absent on leave).				
Instr. CHAMPREUX.				
C. Plane Trigonometry .....	2	....	2	....:36
2A-B. Plane Trigonometry, Analytic Geometry..	4	2	2	47:56
5. Plane Analytic Geometry .....	3	3	....	9:....
7. Spherical Trigonometry .....	3	3	....	13:....
9BM. Integral Calculus .....	3	3	....	24:....
9CM. Advanced Integral Calculus .....	3	....	3	....:11
10AM-BM. Advanced Calculus .....	4	2	2	38:27
12M. Analytic Geometry of Three Dimensions..	3	....	3	....:15
Instr. BERNSTEIN.				
C-D. Plane Trigonometry, Analytic Geometry..	4	2	2	39:23
3A. Elements of Analysis .....	3	3	....	30:....
3B. Elements of Analysis .....	3	3	3	21:16
4A-B. Elements of Analysis .....	6	3	3	15:27
5. Plane Analytic Geometry .....	3	....	3	....:11
Instr. KUSCHKE.				
3A. Elements of Analysis (2 sections: 35, 13)	3	6	....	48:....
3B. Elements of Analysis .....	3	....	3	....:21
4A-B. Elements of Analysis (2nd half-year, 2 sections: 28, 17) .....	6	6	6	45:45
C. Plane Trigonometry .....	2	....	2	....:25
Asst. STAGER.				
C. Plane Trigonometry .....	2	2	....	37:..
D. Plane Analytic Geometry .....	2	....	2	....:22
3A-B. Elements of Analysis .....	6	3	3	23:20
4A-B. Elements of Analysis .....	6	3	3	32:27
Asst. NEWLIN.				
A. Elementary Algebraic Theory .....	2	....	2	....:34
B. Solid and Spherical Geometry .....	2	2	....	22:....
3A. Elements of Analysis .....	3	3	3	35:24
3B. Elements of Analysis .....	3	....	3	....:28
8. Algebra .....	3	3	....	16:..
Asst. WOODS.				
3A. Elements of Analysis (2 sections: 28, 25)	3	....	6	....:53
C. Plane Trigonometry .....	2	....	2	....:31
Asst. SMITH.				
A. Elementary Algebraic Theory .....	2	2	....	34:....
B. Solid and Spherical Geometry .....	3	....	2	....:37
C. Plane Trigonometry .....	2	2	....	46:....
3A-B. Elements of Analysis .....	6	3	3	35:25
8. Algebra .....	3	....	3	....:25



## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Reader KRUGER (Aug.-June).				
Reader MORGAN (Aug.-Dec.).				
Reader LESLIE (Aug.-June).				
Reader STAPLES (Aug.-June).				
Reader BANNISTER (Jan. 1, for 5 mo.).				

MECHANICAL AND ELECTRICAL  
ENGINEERING.

## Prof. CORY.

11A-B. Alternating Currents and Alternating Current Machinery .....	8	4	4	49:46
12CG. Electrical Engineering: Laboratory .....	6	6	6	4:4

## Prof. HESSE, Emeritus.

5A. Thermodynamics .....	3	3	....	56:....
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## Assoc. Prof. REYNOLDS.

1. Elements of Steam Engineering .....	3	3	....	61:....
5A. Thermodynamics .....	3	3	....	56:....
5B. Heat Engines .....	3	....	3	....:55
7C-D. Mechanical Laboratory .....	2	3	3	6:6
14. Thesis for B.S. Degree .....	3	—	—	11:10

## Asst. Prof. LECONTE.

2. Hydrodynamics .....	3	3	....	88:....
3. Hydraulic Machinery .....	3	....	3	....:61
4A-B. Kinematics .....	4	2	2	56:52
4C-D. Kinematics .....	2	3	3	56:52
7A-B. Mechanical Laboratory (1st half-year, 3 sections: 6, 6, 3; 2nd half-year, 2 sections: 6, 5) .....	2	9	6	12:11
14. Thesis for B.S. Degree .....	3	—	—	10:10

## Asst. Prof. NOBLE.

10A-B. Electrical Machinery and Construction..	4	2	2	54:43
10C. Electrical Machinery and Construction ....	2	....	3	....:19
11D. Alternating Currents and Machinery .....	2	....	6	....:17
14. Thesis for B.S. Degree .....	3	—	—	9:8
16. Power Plant Engineering .....	2	2	....	28:....

## Instr. GILCREST.

10C. Electrical Machinery and Construction.....	2	....	6	....:18
11C-D. Alternating Currents and Machinery (1st half-year, 3 sections: 14, 16, 16; 2nd half-year, 2 sections: 17, 14) .....	4	18	12	46:31
14. Thesis for B.S. Degree .....	3	—	—	12:12

## Instr. DOMONOSKE.

1. Elements of Steam Engineering .....	3	3	....	—:....
6A. Machine Design (2 sections: 38, 49) .....	3	....	12	....:87
6B. Machine Design .....	2	12	....	35:....
7C-D. Mechanical Laboratory .....	2	3	3	6:6

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. COX.				
8A. Mechanical Practice (4 sections: 27, 24, 26, 24) .....	2	24	....	101:....
8B. Mechanical Practice (4 sections: 18, 13, 28, 11) .....	2	....	24	....:70
Asst. GEORGE.				
9A. Mechanical Practice (4 sections: 11, 6, 13, 11) .....	2	24	....	41:....
9B. Mechanical Practice (4 sections: 9, 6, 14, 4) .....	2	....	24	....:33

## MILITARY SCIENCE AND TACTICS.

Major LEWIS.				
1A-B. Practical Course .....	1½	3-2	3-2	1058:1033
2A. Theoretical Course .....	1	1	....	559:....
2B. Theoretical Course .....	1	1	....	394:....
2C. Theoretical Course .....	1	....	1	....:36

Asst. DICKIE (Aug. 16-May 16).

Asst. DEWOLF (Aug. 16-May 16).

Asst. WUERTH (Aug. 16-May 16).

Clerk CONNOLLY (July 1-June 30).

## MINERALOGY.

Prof. LAWSON (see also Geology).

Asst. Prof. EAKLE.

1A. Mineralogical Laboratory .....	2	6	....	40:....
2AM. Crystallography .....	2	....	2	....:63
2BM. Crystallographical Laboratory .....	2	....	2	....:63
3BM. Descriptive Mineralogy .....	2	4	....	73:....
5G. Graduate Course .....	—	....	—	....:2

Instr. WOOD (see also Geology).

Asst. ICKES (see also Geology).

Asst. SEARLS (see also Geology).

## MINING AND METALLURGY.

Prof. CHRISTY.

1. Lectures on Mining .....	4	4	....	30:....
2. Lectures on Mining .....	4	....	4	....:32
4. Summer Class in Practical Mining .....	3	1	1	27:25
5. Metallurgy: Introduction. Fuels and Combustion .....	2	2	:....	59:....
8. Metallurgy of Gold, Silver, and Quicksilver .....	2	2	....	38:....
12G. Ore Dressing .....	2	....	2	....:12

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Assoc. Prof. DURHAM.				
3A. Excavation .....	2	....	2	....:62
3B. Mining Laboratory (2 sections: 22, 26)....	1	....	6	....:48
18AB. Mine Surveying (1st half-year, 2 sections: 44, 16; 2nd half-year, 2 sections: 22, 21) .....	2	2	2	60:43
20G. Mining Machinery .....	2	2	....	6:....
21AG-BG. Mine and Mill Design .....	4	6	6	2:2
Assoc. Prof. HERSAM.				
6. Metallurgy: Ore Crushing, Sampling Fluxes	2	....	2	....:60
9. Metallurgical Laboratory: Mill Work (2 sections: 8, 8) .....	2	12	....	16:....
11. Metallurgy of Lead and Copper .....	2	....	2	....:30
10. Metallurgical Laboratory (2 sections: 7, 7)	2	....	12	....:14
16G. Metallurgy of Iron and Steel .....	2	2	....	16:....
22G. Metallurgy of Less Common Metals .....	2	2	....	3:....
Honorary Prof. LINDLEY.				
Asst. Prof. MORLEY.				
7A-B. Assaying (1st half-year, 2 sections: 25, 30) .....	4	13	13	55:57
Asst. HERRICK.				
Mechanician SPENCER.				
Storekeeper and Helper TALBOT.				

## MUSIC.

Prof. WOLLE.				
1A-B. Harmony (1st half-year, 2 sections: 53, 11; 2nd half-year, 2 sections: 37, 18) .....	2	2	2	64:55
2A-B. Counterpoint .....	2	1	1	16:6
3A-B. Choral Music .....	2	2	2	73:121
Prof. SCHOLZ.				
4A-B. Orchestral Music .....	2	2	2	41:37
Reader SMITH (Aug. 1-June 1).				

## ORIENTAL LANGUAGES.

Agassiz Prof. FRYER.				
2. The Philosophies and Religions of China ....	3	3	....	22:....
3A-B. Elementary Study of Kuan-hua .....	6	3	3	12:9
2A-B. Chinese Literature: Language .....	2	1	1	44:13
2C. Educational Conditions .....	1	1	....	4:....
4A-B. Advanced Study of Kuan-hua .....	6	3	3	3:4
5AM-BM. Elementary Study of Wen-li .....	3	....	3	....:3
11A. Commerce of China and Japan: Economic	3	3	....	80:....
11B. Commerce of China and Japan: Political	3	....	3	....:119
12. Philosophies and Religions of China .....	3	....	3	....:41
14G. Oriental Seminar .....	2	2	....	3:....
15G. Oriental Seminar .....	2	....	2	....:8

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. KUNO.				
9A-B. Elementary Study of Japanese Language	6	3	3	21:14
9C-D. Second-year Japanese .....	6	3	3	8:6
10A-B. Advanced Japanese .....	6	3	3	4:3
PALAEONTOLOGY. (See Geology.)				
PATHOLOGY.				
Prof. TAYLOR.				
1. Morphological Pathology .....	8	12	....	18:....
2. Chemical Pathology .....	5	8	....	18:....
Asst. Prof. WARD (see also Hygiene).				
4M. Hygiene .....	5	....	9	....:3
8M. Bacteriology .....	—	By appointment		2:1
Instr. RAHTJEN.				
Technical Asst. JANE.				
Instr. QUINAN.				
3M. Physiological Chemistry .....	16	12	....	34:....
PHILOSOPHY.				
Prof. HOWISON, Emeritus.				
Prof. STRATTON.				
2A-B. General Psychology .....	6	3	3	120:216
13AG-BG. Psychology Seminary .....	4	2	2	7:5
15AG-BG. Psychology Research .....	3	12	12	4:4
Special Work .....	—	....	—	....:5
Lectr. PRINCE.				
34M. Abnormal Psychology .....	2	....	2	....:90
Assoc. Prof. RIEBER.				
1. Formal Logic (2nd half-year, 2 sections: 89, 75) .....	3	3	6	92:164
11AG-BG. Theory of Knowledge .....	2	2	2	—:3
Assoc. Prof. OVERSTREET.				
3A-B. History of Philosophy .....	6	3	3	32:25
4A-B. Ethics, Theoretical and Practical .....	6	8	8	68:53
16AM-BM. Plato and Aristotle .....	4	2	2	5:5
Asst. Prof. ADAMS.				
1. Formal Logic (1st half-year, 2 sections: 61, 32; 2nd half-year, 2 sections: 55, 58).....	3	6	6	93:113
29A-B. Comparative Religions .....	4	2	2	43:45
35A-B. Nineteenth Century Thought .....	4	2	2	10:10
Instr. BROWN.				
6M. Introduction to Psychological Experiment..	4	4	4	9:9
33AM-BM. Advanced General Psychology .....	4	2	2	5:5
15AG-BG. Psychological Research .....	6	12	12	4:4
Instr. PARKER.				
1. Formal Logic (1st half-year, 2 sections: 36, 22; 2nd half-year, 2 sections: 50, 19) .....	3	6	6	58:69
36A-B. Aesthetics .....	2	2	2	13:8
Stenographer and Clerk L. MYERS (Jan. 1-May 15).				

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
PHYSICAL CULTURE.				
Prof. MAGEE.				
1E-F. Corrective Exercises .....	2	4	4	35:28
2C-D. Advanced Course for Women .....	1	2	2	65:40
3A-B. History and Literature of Physical Training, and Public School Exercises .....	4	2	2	24:26
4A. Human Anatomy .....	2	2	....	26:....
5. Anthropometry and Prescription of Exercise .....	2	....	2	....:24
6AM-BM. Playground Supervision .....	2	1	1	19:19
Asst. Prof. LIGDA.				
1A-B. Course for Men (1st half-year, 2 sections: 288, 240; 2nd half-year, 2 sections: 225, 225) .....	2	8	8	528:450
1G-H. Principles of Wrestling .....	1	2	2	20:8
1I-J. Advanced Wrestling .....	1	2	2	1:5
Asst. FRITSCH.				
1C-D. Advanced Course for Men .....	2	4	4	11:14
Asst. MAGEE.				
2A-B. Course for Women (1st half-year, 3 sections: 54, 146, 147; 2nd half-year, 3 sections: 53, 127, 121) .....	2	12	12	347:301
2E-F. Corrective Exercises (1st half-year, 3 sections: 16, 16, 16; 2nd half-year, 3 sections: 14, 12, 15) .....	2	—	—	48:41
Asst. PLACE.				
Asst. SCOTT (Aug. 15-May 15)				
Asst. DEAN (Aug. 15-Oct. 30).				
Asst. ROSE (Nov. 1-May 15).				
Asst. CLOUGH (Jan. 10-May 10).				
Reader BARNARD.				
Five assts. at the beginning and ending of the year.				

## PHYSICS.

Prof. SLATE.				
5AM-BM. Analytic Mechanics .....	6	3	3	40:56
15AG. Precession and Nutation .....	3	3	....	3:....
15G. Dynamics of Rotation .....	3	....	3	....:5
17G. Readings and Discussions (2nd half-year, 2 sections: 2, 1) .....	4	2	4	2:3
Prof. LEWIS.				
2A-B. General Physics .....	6	3	3	50:54
11AM. Electric Discharges through Gases .....	2	2	....	13:....
11BM. Laboratory Work in 11AM .....	—	3	....	1:....
11CG. Spectroscopy .....	—	....	3	....:2
11G. Spectroscopy Lectures .....	2	....	2	....:6
8AM. Polarized Light .....	3	....	4	....:1
16G. Special Advanced Study .....	—	6	6	—:1
17G. Readings and Discussions .....	2	1	1	1:1



STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Assoc. Prof. RAYMOND.				
5AM-BM. Analytic Mechanics (1st half-year, 2 sections: 77, 49; 2nd half-year, 2 sections: 74, 48) .....	6	6	6	126:122
6AG. Electric Waves and Oscillations .....	2	....	2	....:3
6G. Harmonic Motion .....	2	2	....	4:....
7M. Electrical Measurements (2 sections: 9, 18) .....	3	....	7	....:27
10M. Electricity (2 sections: 32, 29) .....	3	5	....	61:....
16G. Special Advanced Study .....	—	....	—	....:2
Assoc. Prof. MINOR.				
1A-B. General Physics (1st half-year, 3 sections: 29, 23, 38; 2nd half-year, 2 sections: 82, 78) .....	3	13	5	90:160
3A-B. Physical Measurement (1st half-year, 2 sections: 88, 12; 2nd half-year, 3 sections: 19, 22, 26) .....	2-4	6	12	100:67
2C-D. General Physics .....	6	—	—	34:32
Asst. Prof. HALL.				
2C-D. General Physics .....	6	2	2	147:140
9AM. Molecular Physics .....	2	....	2	....:5
10AM. Electricity .....	4	8	....	4:....
12AM. Energetics .....	—	....	4	....:5
13M. Physical Optics .....	2	6	....	2:....
18. Special Undergraduate Study .....	—	—	3	2:1
20G. Seminar Course for Teachers .....	2	....	2	....:4
Instr. ELSTON.				
1A-B. General Physics (1st half-year, 4 sections: 135, 125, 65, 90; 2nd half-year, 6 sections: 100, 95, 51, 71, 78, 58) .....	6	12	20	415:453
Mechanician STAMPER.				
Asst. ———.				

PHYSIOLOGY.

Prof. LOEB.				
2M. Experimental Biology and General Physiology .....	4	2	....	42:....
13 or 13G. Seminar, Graduate or Undergraduate .....	—	....	—	....:2
Prof. TAYLOR (see Pathology).				
Asst. Prof. BANCROFT (absent on leave).				
Asst. Prof. MAXWELL.				
4M. Physiology of the Blood, Circulation, Respiration, Muscle, Nerve Secretion and Reproduction .....	6	12	....	34:....
5M. Physiology of the Nervous System and Special Senses .....	6	....	12	....:16

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. Prof. ROBERTSON.				
1. Introduction to Experimental Biology .....	3	....	6	....:14
6M. Pharmacology .....	3	5	....	17:....
Instr. BURNETT.				
4M. Physiology of the Blood, Circulation, Respiration, Muscle, Nerve, Secretion and Reproduction .....	6	12	....	34:....
5M. Physiology of the Nervous System and Special Senses .....	6	....	12	....:16
Asst. ALLEN.				
Asst. MOORE.				
Asst. BAILEY (Aug.-July).				
Tech. Asst. WASTENEYS (Aug. 1-Oct. 12).				

## POLITICAL SCIENCE.

Prof. MOSES (see also History).

3A. Latin-American Institutions in the Colonial Period .....	3	3	----	4:....
2M. History of Political Theories .....	3	3	----	9:....
3BM. The Latin-American Republics .....	3	----	3	....:28
4G. Political Science .....	2	----	2	....:2
7M. International Relations .....	2	----	2	....:14
8M. The Government of Dependencies .....	2	2	----	7:....

Asst. Prof. REED.

1A-B. Government .....	6	3	3	194:130
10M. Government of Municipalities .....	6	3	3	15:17
11G. Seminar in Government .....	4	2	2	6:6

Asst. Prof. NOYES (see also Slavic Languages).

9M. Russian Political Institutions .....	3	----	3	....:10
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Reader PAUL (Aug. 20, 1909, 6 mo.).

Asst. TALBERT (Aug. 20, 1909, 1 yr.).

## ROMANIC LANGUAGES.

Prof. FOULET (first term).

7AM. History of French Literature .....	3	3	----	28:....
9AM. Voltaire and Montesquieu .....	2	2	----	24:....
30AM. Studies in French Style and Composition .....	2	2	----	23:....
31AG. Seminar .....	3	3	----	3:....

Asst. Prof. CHAMBERS.

C-D. Second-year French .....	6	3	3	34:35
4AM-BM. Modern French .....	6	3	3	20:10
7BM. History of French Literature .....	3	----	3	....:26
8AM. Poetry of Victor Hugo .....	3	3	----	16:....
8BM. Novels of Balzac .....	3	----	3	....:16
29. Special Study .....	—	----	----	....:3
3AG. The Teaching of Modern Languages .....	1	1	----	18:....

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. Prof. CLARK (see also Spanish).				
A-B. First-year French .....	6	3	3	23:17
4AM-BM. Modern Spanish .....	6	3	3	29:22
7AM-BM. History of Spanish Literature .....	6	3	3	8:12
4AM-BM. Modern French .....	6	3	3	27:27
Instr. HOWARD.				
A-B. First-year French .....	6	3	3	45:41
A-B. First-year Spanish (1st half-year, 2 sections: 43, 40; 2nd half-year, 2 sections: 30, 31) .....	6	6	6	83:61
C-D. Second-year Spanish .....	6	3	3	39:32
3BG. French Phonetics .....	1	....	1	....21
29. Special Study in Spanish .....	—	....	—	....1
Asst. Prof. FAUCHEUX.				
4AM-BM. Modern French .....	6	3	3	33:31
17AM-BM. The 16th Century French .....	4	2	2	9:21
20AM-BM. Classical Drama French .....	4	2	2	31:26
20AG-BG. Old French .....	4	2	2	2:6
30BM. Studies in French Style and Composition .....	2	....	2	....29
Instr. BRANSBY.				
AB-CD. First-year Spanish .....	10	5	5	30:18
C-D. Second-year Spanish .....	6	3	3	23:17
6AM-BM. Spanish Speaking and Writing .....	4	3	3	24:20
8AM. Modern Spanish Fiction .....	3	3	....	12:....
8BM. Modern Spanish Drama .....	3	....	3	....9
Instr. CHILD.				
1A-B. First-year Italian .....	6	3	3	16:5
2A-B. Second-year Italian .....	6	3	3	4:3
6AM. Selections from Dante, Petrarch, and Boccaccio: Italian .....	3	3	....	2:....
4AM-BM. Modern French .....	6	3	3	23:25
Instr. LAMARE.				
A-B. First-year French .....	6	3	3	37:—
C-D. Second-year French (1st half-year, 2 sections: 38, 36; 2nd half-year, 2 sections: —, —) .....	6	6	6	—:—
6AM-BM. French Speaking .....	4	3	3	18:—
Instr. SOLOMON.				
A-B. First-year French .....	6	3	3	39:29
AB-CD. Elementary French .....	10	5	5	39:24
C-D. Second-year French (1st half-year, 2 sections: 31, 36; 2nd half-year, 2 sections, 21, 42) .....	6	6	6	67:63
Instr. GREENLEAF.				
A-B. First-year French (1st half-year, 2 sections: 47, 37; 2nd half-year, 2 sections: 29, 21) .....	6	6	6	84:50
CD. Second-year French .....	5	....	5	....21
C. Second-year French .....	3	3	....	38:....
6AM-BM. French Speaking .....	4	3	3	15:16

## STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs.		Students
		1st half	2nd half	
Asst. HIDALGO (Aug. 15-May 15).				
A-B. First-year Spanish (1st half-year, 4 sections: 43, 51, 40, 44; 2nd half-year, 4 sections: 33, 40, 30, 32) .....	6	12	12	178:18
Asst. MATIGNON (Aug. 15-May 15).				
A-B. First-year French .....	6	3	3	42:43
AB. First-year French .....	5	....	5	....:32
Asst. CACERAS (Aug. 15-May 15).				
A-B. First-year Spanish (1st half-year, 2 sections: 42, 32; 2nd half-year, 2 sections: 32, 17) .....	6	6	6	74:49
Reader LEETE (Aug. 15-May 15).				
Reader SOULAS (Aug.-Jan.-May).				

## SANSKRIT.

Asst. Prof. RYDER.				
1M. Elementary Sanskrit .....	3	3	....	1:....
2M. Elementary Sanskrit (continued) .....	3	....	3	....:1
5M. Advanced Classical Sanskrit .....	2	2	....	1:....
6M. Advanced Classical Sanskrit (continued)..	2	....	2	....:1
20. The Veda and the Philosophical Systems....	2	2	....	13:....
21. Classical Sanskrit Literature .....	2	....	2	....:24

## SEMITIC LANGUAGES.

Asst. Prof. POPPER.				
4AM-BM. Hebrew .....	4	2	2	1:2
5AG-BG. Arabic .....	4	2	2	1:1
6AG-BG. Hebrew (Exegetical Course) .....	4	2	2	1:1
7CG. Post Biblical Hebrew Literature .....	2	1	1	1:1
11AM-BM. Syriac .....	4	2	2	2:2
13AM-BM. Arabic .....	4	2	2	1:1
14AG-BG. Arabaia .....	2	1	1	1:1
19AG-BG. Semitic Epigraphy .....	2	1	1	2:2
20AG-BG. Semitic Seminar .....	2	1	1	1:1

## SLAVIC LANGUAGES.

Asst. Prof. NOYES.				
1A-B. Elementary Russian .....	6	3	3	1:1
1A. Elementary Russian .....	3	....	3	....:3
2AM. Second-year Russian .....	2	....	2	....:1
4AM-BM. Fourth-year Russian .....	4	2	2	1:2
20. The Russian Novelists .....	3	3	....	9:....
21. Russian Literature .....	2	....	2	....:13
25. History of Russia and Poland, 862 to 1905	3	3	....	3:....

STATEMENT OF INSTRUCTION AND ATTENDANCE—(Continued).

INSTRUCTOR AND COURSE.	Units	Instructor's hrs. 1st half 2nd half		Students
ZOOLOGY.				
Prof. RITTER (at La Jolla).				
19. Nature and Use of Biology (3 hrs. last third of 2nd half-year) .....	1	---	1	....:15
Assoc. Prof. KOFOID.				
1. The Fundamentals of Zoology (3 sections: 30, 30, 24) .....	4	14	---	84:....
2. General Zoology (2 sections: 24, 24) .....	4	---	18	....:48
7AM. Advanced Invertebrate Zoology .....	3	7	---	21:....
9M. Biological Examination of Water .....	1	---	3	....:8
10G. Research Work .....	Hrs. arranged			10:12
12G. Zoological Seminar .....	1	2	1	9:11
18M. Experimental Zoology .....	2	---	2	....:6
Assoc. Prof. TORREY (absent on leave).				
Instr. LONG.				
5M. Cytology .....	4	8	---	6:....
5(M. Microscopical Technique .....	1 or 2	3	6	2:4
6M. Embryology .....	4	---	8	....:30
7M. Advanced Invertebrate Zoology .....	3	7	---	8:....
7AM. Advanced Invertebrate Zoology .....	3	---	4	....:6
10G. Research Work .....	—	---	—	....:1
Instr. HINDLE.				
3. Elementry Embryology .....	4	---	9	....:10
4M. Comparative Anatomy (with Prof. Merriam) .....	4	12	---	11:....
Director GRINNELL, of the California Museum of Vertebrate Zoology.				
Asst. WATSON.				
Asst. TRACY.				
Asst. FORSYTH.				
Helper DAVISON.				
Reader SHARP (Jan. 1-May 1).				



TABLE 2.—Summaries of officers of instruction in the Colleges at Berkeley, 1892-1910.

Year	Professors		Assoc.	Asst.			Dept.	Teaching	
	Acting	Emer.	Profes.	Profes.	Lectrs.	Instrs.	Assts.*	Fellows	Totals
1892-93.....	16	....	9	10	1	19	18	4	77
1893-94.....	17	....	9	12	0	20	37	7	102
1894-95.....	21	....	9	12	0	24	41	7	114
1895-96.....	21	....	10	13	0	26	37	6	113
1896-97.....	22	....	10	18	0	21	28	8	107
1897-98.....	25	....	8	25	2	35	26	6	127
1898-99.....	30	1	14	19	1	40	36	0	141
1899-1900.....	29	2	15	20	2	40	40	5	153
1900-01.....	31	2	14	19	2	41	45	2	156
1901-02.....	29	1	13	22	5	56	43	0	169
1902-03.....	34	1	12	26	14	64	48	4	203
1903-04.....	36	2	14	42	14	51	60	3	222
1904-05.....	39	1	16	48	16	45	86	3	254
1905-06.....	37	3	18	51	14	55	82	3	263
1906-07.....	40	3	19	57	14	46	94	3	276
1907-08.....	44	3	22	59	12	47	104	4	295
1908-09.....	50	3	28	62	14	53	100	6	316
1909-10.....	55	8	23	70	14	52	118	7	347

\* Including readers.

TABLE 3.—Officers of Instruction in the Colleges and Departments away from Berkeley.

Year	L. O.*	Art	Law	Medicine S. F.	L. A.	P. G. Medicine	Dentistry	Pharm.	Vetr.
1896-97.....	8	6	5	84	....	54	37	14	15
1897-98.....	10	6	6	49	....	51	41	10	10
1898-99.....	11	6	5	68	....	58	43	7	14
1899-1900.....	11	8	5	70	....	82	45	10	12
1900-01.....	12	8	5	68	....	94	45	9	12
1901-02.....	11	8	5	81	....	101	50	11	....
1902-03.....	12	9	5	50	....	109	46	10	....
1903-04.....	13	10	6	62	....	28	24	9	....
1904-05.....	13	9	6	55	....	23	25	8	....
1905-06.....	9	9	6	66	....	....	22	8	....
1906-07.....	7	....	6	52	....	....	34	9	....
1907-08.....	7	11	6	54	....	....	34	8	....
1908-09.....	8	7	6	54	....	....	31	8	....
1909-10.....	7	7	6	58	59	....	26	8	....

\* In 1894-95, 7; 1895-96, 7.

TABLE 4.—Students in the several colleges, 1900–1910.  
 NOTE.—The upper figures on the left of each group refer to men, the lower to women; the figures on the right side are the totals.

In Berkeley:		1900–01	1901–1902	1902–03	1903–04	1904–05	1905–06	1906–07	1907–08	1908–09	1909–10
<i>Graduate Students:</i>	.....	{ 100 83 183	118 112 230	123 96 219	160 109 269	141 102 243	155 196 351	148 133 281	151 173 324	186 217 403	214 211 425
	<i>Undergraduates:</i>	{ 109 172 281	107 177 284	90 194 284	67 165 232	70 145 215	65 129 194	40 105 145	39 93 132	39 98 137	55 116 151
	Social Sciences.....	276 650 926	257 695 952	268 712 980	265 714 979	274 740 1014	290 764 1054	286 763 1049	311 790 1101	321 732 1053	341 768 1109
	Natural Sciences.....	80 98 178	87 107 194	89 113 202	84 108 192	81 108 189	88 103 191	106 115 221	124 96 220	177 104 281	230 170 400
	Commerce.....	38 3 41	54 3 57	87 1 88	114 5 119	119 6 125	149 5 154	150 4 154	177 0 177	186 4 190	222 2 224
	Agriculture.....	36 6 42	52 9 61	81 10 91	96 6 102	96 10 106	115 8 123	117 10 127	128 4 132	145 7 152	191 6 197
	Mechanics.....	158 1 159	189 1 190	233 2 235	242 1 243	264 2 266	267 0 267	264 0 264	260 0 260	293 0 293	301 0 301
	Mining.....	216 0 216	247 1 248	277 0 277	293 0 293	285 0 285	271 0 271	274 0 274	278 0 278	261 0 261	243 0 243
	Civil Engineering.....	74 0 74	90 1 91	134 0 134	166 0 166	207 0 207	211 0 211	219 0 219	250 0 250	246 0 246	232 0 232
	Chemistry.....	120 21 141	139 32 171	134 31 165	87 20 107	55 7 62	48 6 54	37 5 42	34 5 39	47 3 50	44 2 46
	At Large.....								6 8 14	14 22 36	14 21 35
	Medical.....							9 1 10	6 1 7		10 5 15
	Total Under-graduates.....	1107 951 2058	1222 1026 2248	1393 1063 2456	1414 1019 2433	1451 1018 2469	1504 1015 2519	1502 1003 2505	1613 997 2610	1729 970 2699	1863 1090 2953
Total in the Colleges at Berkeley (deducting for duplicates)		1202 1027 2229	1335 1135 2470	1514 1155 2669	1570 1118 2688	1590 1109 2699	1647 1192 2839	1643 1118 2761	1760 1156 2916	1907 1176 3083	2007 1285 3352

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	1900-01	1901-1902	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10
Lick Observatory, Mt. Hamilton:	{ 2 { 0 2	4 4 4	4 4 4	3 3 3	3 3 3	3 1 4	1 1 2	3 0 3	3 0 3	1 1 2
In San Francisco :										
San Francisco Institute of Art .....	{ 116 { 155 271	82 104 186	70 113 183	78 135 213	94 149 243	75 120 195		81 99 180	66 73 139	113 94 207
Hastings College of the Law.....	{ 114 { 6 120	101 5 106	82 4 86	73 4 77	74 5 79	74 2 76	73 1 74	69 0 69	98 2 100	116 1 117
College of Medicine.....	{ 145 { 21 166	131 19 150	96 16 112	99 15 114	88 12 100	64 9 73	35 5 40	25 1 26	28 7 35	39 10 49
Post-Graduate Medical Department	{ 11 { 0 11	12 0 12	18 3 21		12 2 14					
College of Dentistry.....	{ 148 { 4 152	133 3 136	121 4 125	107 4 111	85 2 87	71 3 74	64 1 65	69 0 69	53 0 53	57 0 57
California College of Pharmacy .....	{ 70 { 7 77	70 17 87	63 16 79	75 7 82	83 3 86	76 5 81	43 4 47	42 3 45	62 5 67	67 5 72
Total in the Colleges in San Francisco }	{ 604 { 193 797	529 148 677	450 156 606	432 165 597	436 173 609	360 139 499	215 11 236	286 103 389	307 87 394	392 110 502
In Los Angeles :										
Total in the University (deducting for duplicates).....	{ 1084 { 908 3024	1861 1283 3144	1964 1311 3275	1997 1280 3277	2014 1280 3294	2007 1331 3338	1858 1129 2987	2046 1259 3305	2193 1257 3450	2465 1395 3860

TABLE 5.—Showing proportion (per cent.) of the undergraduates, including special students, in each of the colleges at Berkeley.

	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10
Letters .....	11.56	9.54	8.70	7.70	5.70	5.05	5.07	5.11
Soc. Sciences ..	39.90	40.24	41.06	41.84	41.87	42.14	39.01	37.52
Nat. Sciences ..	8.22	7.89	7.65	7.58	8.82	8.42	10.41	13.54
Commerce .....	3.58	4.89	5.06	5.71	6.14	6.78	7.03	7.50
Agriculture.....	3.71	4.19	4.29	4.88	5.07	5.05	5.63	6.67
Mechanics .....	9.57	9.99	10.77	10.59	10.53	9.96	10.85	10.19
Mining .....	11.28	12.04	11.54	10.75	10.93	10.65	9.67	8.22
Civ. Eng. ....	5.46	6.82	8.38	8.37	8.74	9.58	9.11	7.11
Chemistry .....	6.72	4.40	2.51	2.14	1.67	1.49	1.85	1.55
Medicine .....	.....	.....	.....	.....	.30	.26	.55	.50
At large .....	.....	.....	.....	.....	.....	.53	1.33	1.18

TABLE 6.—Summary of students registered to November 1, 1907, 1908, 1909, and 1910.

	Nov. 1, 1907	Nov. 1, 1908	Nov. 1, 1909	Nov. 1, 1910
A. The colleges at Berkeley:				
(1) Graduate students in the colleges of letters and science (including engineering) .....	253	328	337	416
(2) Undergraduate students in the colleges of letters and science (including engineering) .....	2,460	2,538	2,745	3,033
Total .....	2,713	2,866	3,082	3,449
B. The colleges in San Francisco:				
(1) Art .....	69	107	116	206
(2) Law .....	65	95	112	59
(3) Medicine (3rd and 4th years only) ..	33	36	60	102
(4) Dentistry .....	69	56	57	59
(5) Pharmacy .....	41	69	78	85
Total .....	282	363	423	511
C. The Los Angeles Dept. of Medicine (In 1909-10, 2nd, 3rd and 4th years; in 1910-11, 3rd and 4th years.)* .....				
Total students in all colleges .....	2,995	3,229	3,549	3,994
D. The summer session .....				
..... ('07) 522		('08) 661	('09) 819	('10) 1,051

\*E. Students in medicine (1st and 2nd years: included in colleges at Berkeley.)

Graduate .....	9	8	13	10
Undergraduate .....	4	10	20	21
Total .....	13	18	33	31

TABLE 7.—Degrees conferred, 1903–1910.

NOTE.—Figures for 1910 cannot be completed before December 21, 1910.

DEGREE	1903	1904	1905	1906	1907	1908	1909	1910
LL.D. ....	{ 1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 1	9 0
J.D. ....				2 1 3	3 0 3	6 0 6	7 0 7	5 1
Ph.D. ....	{ 3 0 3	5 0 5	4 0 4	6 0 6	4 0 4	4 0 4	10 0 10	4 1
M.A. ....	{ 12 6 18	4 1 5	4 5 9	7 7 14	5 4 9	9 3 12	7 10 17	6 11
M.L. ....	{ 4 3 7	3 7 10	2 3 5	1 9 10	8 3 11	9 13 22	9 11 20	6 13
M.S. ....	{ 4 1 5	4 2 6	5 3 8	10 0 10	9 4 13	2 3 5	12 10 22	16 5
Number of higher degrees	{ 24 10 34	16 10 26	15 11 26	26 17 43	26 11 37	30 19 49	46 31 77	46 31 77
A.B. ....	{ 28 36 64	17 47 64	14 37 51	18 41 59	10 22 32	14 29 43	10 17 27	6 28
B.L. ....	{ 48 104 152	28 130 158	36 108 144	44 131 175	44 90 134	33 128 161	44 111 155	42 90
Ph.B. ....	{ 0 0 0	0 1 1	0 0 0	1 1 2				
{ Nat. Sci. ....	{ 13 24 37	13 26 39	16 20 36	17 19 36	7 13 20	13 34 47	19 16 35	27 18
{ Commerce	{ 5 0 5	6 0 6	12 1 13	24 0 24	16 0 16	18 0 18	14 0 14	21 1
{ Agricult're	{ 7 0 7	5 2 7	6 2 8	13 0 13	9 1 10	13 0 13	21 1 22	17 1
B.S. { Mechanics	{ 32 0 32	31 0 31	20 0 20	21 0 21	36 0 36	42 0 42	26 0 26	39 0
{ Mining	{ 30 0 30	30 0 30	22 0 22	41 0 41	43 0 43	35 0 35	26 0 26	22 0
{ Civil Eng...	{ 10 0 10	18 0 18	19 0 19	33 0 33	31 0 31	20 0 20	34 0 34	27 0
{ Chemistry	{ 20 6 26	15 6 21	14 2 16	8 2 10	5 0 5	6 2 8	3 1 4	5 0
Number of bach- elor's degrees	{ 193 170 363	163 212 375	159 170 329	220 194 414	201 126 327	194 193 387	197 146 343	206 138 344
LL.B. ....	{ 33 0 33	20 1 21	19 1 20	15 1 16	28 0 28	14 0 14	14 0 14	23 0
M.D. ....	{ 25 5 30	25 3 28	16 2 18	17 2 19	21 4 25	15 1 16	6 1 7	7 4
D.D.S. ....	{ 40 3 43	44 1 45	40 0 40	22 2 24	18 0 18	20 0 20	15 0 15	16 0
*Ph.G. ....	{ 30 9 39	18 5 23	36 1 37	24 2 26	24 2 26	10 1 11	18 1 19	27 2
Pharm.B. ....	{ 3 0 3	0 0 0	0 0 0	3 0 3	0 1 1	1 0 1	0 0 0	1 0
Number profes- sional degrees	{ 131 17 148	107 10 117	111 4 115	81 7 88	91 7 98	60 2 62	53 2 55	74 6 80

\*Ph.G. discontinued and replaced by Ph.C. in and after 1905.



TABLE 8.—Number of accredited schools each year, since the first accrediting of schools in 1883-84.

	1883-84	1884-85	1885-86	1886-87	1887-88	1888-89	1889-90	1890-91	1891-92	1892-93	1893-94	1894-95	1895-96	1896-97
No. public high schools accredited .....	3	4	6	6	6	7	11	17	24	30	39	43	52	61
No. private secondary schools accredited..	0	0	0	0	1	2	2	6	7	10	9	14	15	15
Total no. schools accredited .....	3	4	6	6	7	9	13	23	31	40	48	57	67	76
	1897-98	1898-99	1899-1900	1900-01	1901-02	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09*	1909-10*	
No. public high schools accredited .....	66	76	87	93	93	100	104	99	106	114	122	140	147	
No. private secondary schools accredited..	16	15	23	23	22	18	20	21	23	23	25	30	31	
Total no. schools accredited .....	82	91	110	116	115	118	124	120	129	137	147	173	178	

\* In 1908-09 and 1909-10, 27 public high schools and 7 private secondary schools, though not fully accredited, were authorized to recommend for those years.

TABLE 9.—Enrollment of graduate students.

	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10
Total number of graduate students .....	269	243	351	281	324	403	425
Number from University of California .....	137	130	240	159	177	236	214
Percentage of graduate students from the University of California ....	50.9	53.4	68.3	56.4	54.6	58.5	50.3
Percentage of graduate students from other institutions .....	49.1	46.6	31.7	43.6	45.4	41.4	49.6
Total number of colleges and universities represented .....	71	71	79	67	81	90	98
Number of graduate students taking higher degrees (masters' and doctors' degrees not including juris doctor)....	29	28	35	34	49	61	66
Percentage of graduate students taking higher degrees (masters' and doctors' degrees not including juris doctor)....	10.8	11.5	9.9	12.1	15.1	15.1	15.5
Number of graduate students receiving Ph.D....	3	4	6	5	4	10	5
Number of graduate students receiving the bachelor's degree .....	18	20	14	8	3	7	8
Number of graduate students taking LL.B. in the academic departments .....	3	2	....	....	....	....	....
Number of graduate students taking juris doctor in the academic departments .....	....	....	3	3	6	7	6

TABLE 10.—The college residence of the students at Berkeley, September, 1905, 1906, 1907, 1908, 1909, 1910.

Graduate students:												
	No. 1905	No. 1906	No. 1907	No. 1908	No. 1909	No. 1910	% 1905	% 1906	% 1907	% 1908	% 1909	% 1910
Berkeley .....	197	159	208	249	267	313	75.4	80.6	84.9	81.3	82.6	79.0
Oakland .....	23	16	13	17	18	31	8.8	8.1	5.3	5.5	5.5	7.8
San Francisco .....	32	11	17	22	16	24	12.2	5.6	6.9	7.1	4.9	6.0
Alameda .....	2	5	3	10	2	8	.7	2.6	1.2	3.2	.6	2.0
Other points .....	7	5	4	9	20	20	2.6	3.1	1.6	2.9	6.0	5.0
Totals .....	261	196	245	307	323	396						
Undergraduate students:												
	No. 1905	No. 1906	No. 1907	No. 1908	No. 1909	No. 1910	% 1905	% 1906	% 1907	% 1908	% 1909	% 1910
Berkeley .....	1,847	1,900	1,982	1,983	2,204	2,413	78.6	80.4	81.0	79.4	81.1	80.1
Oakland .....	208	241	239	257	271	289	8.8	10.2	9.7	10.0	9.9	9.6
San Francisco .....	237	166	170	196	182	238	10.0	7.0	6.9	7.8	6.7	7.0
Alameda .....	49	47	46	54	51	55	2.8	2.0	1.8	2.2	1.8	1.8
Other points .....	8	9	8	8	7	15	.3	.4	.3	.3	.2	.4
Totals .....	2,349	2,363	2,445	2,498	2,715	3,010						

STATISTICS OF THE INFIRMARY  
COMPILED BY THE UNIVERSITY PHYSICIAN

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MEDICAL EXAMINATIONS OF NEW STUDENTS, 1908-09.

	Men	Women		Men	Women
Anaemia .....	....	4	Operations:		
Chest deformity .....	145	91	Eye .....	2	1
Ears, defective .....	33	13	Knee .....	2	....
Eyes, defective .....	126	115	Nose .....	15	5
Feet, weak arches .....	173	246	Tonsils .....	6	17
General condition:			Varicocele .....	4	....
Excellent .....	39	25	Phimosis .....	13	....
Good .....	324	156	Shoulders:		
Average .....	169	83	Right lower .....	308	143
Fair .....	61	45	Left lower .....	25	96
Poor .....	4	66	Stooped .....	52	94
Heart, abnormal .....	79	22	Skin, diseased .....	178	47
Hernia .....	35	1	Spine:		
Lungs, abnormal .....	11	5	Antero-posterior curve .....	102	79
Menstrual disorders .....	....	129	Lateral curve .....	46	98
Nephritis .....	....	1	Teeth, poor .....	115	17
Nose, diseased .....	54	54	Testicle, undescended ....	6	....
Operations:			Throat, diseased .....	106	48
Amputations .....	4	1	Thyroid, enlarged .....	2	57
Appendicitis .....	9	2	Unvaccinated .....	123	73
Cervical glands .....	3	6	Varicocele .....	91	....
Circumcision .....	60	....			
Students examined .....				607	375
Total .....					982

## INFIRMARY, 1908-09.

DISEASES	Men	Women	DISEASES	Men	Women
Appendicitis .....	4	2	Neuralgia .....	1	5
Arthritis .....	1	....	Neurasthenia .....	1	7
Asthma .....	2	....	Nose and Throat, of the	25	24
Bronchitis .....	33	5	Paratyphoid .....	3	....
Constipation .....	1	....	Pleurisy .....	4	1
Digestion, of the .....	17	8	Pneumonia .....	4	....
Diphtheria .....	1	2	Poison Oak .....	1	3
Dislocations .....	1	....	Renal Calculus .....	3	....
Ear, of the .....	7	3	Scarlet Fever .....	2	....
Eye, of the .....	1	1	Skin, of the .....	1	....
Fractures .....	4	4	Sprains .....	8	4
Heart, of the .....	2	....	Tonsillitis .....	31	16
Infections .....	11	3	Tuberculosis of Lungs ..	3	1
Injuries .....	15	....	Tuberculosis of Larynx.	1	....
Jaundice .....	4	3	Tuberculosis of Glands..	1	1
Malaria .....	17	....	Tuberculosis of Bladder	1	....
Measles .....	4	2	Tuberculosis of Testicle	1	....
Miscellaneous .....	18	6	Vaccinations .....	1	....
Mumps .....	19	3	Women, of .....	....	5
Myalgia .....	2	1			
Total .....				256	110
Discharged, Well .....				200	76
"    Relieved .....				51	33
"    Not relieved .....				5	1
Total .....				256	110
Total number of Infirmary days .....					2,093
Number of days open .....					276
Total number of patients .....					366
Average stay in days .....					5.62
Average number of patients per day .....					7.6
Operations .....					65
University Physicians' visits .....					2,639
Number of prescriptions .....					36

## OPERATIONS, 1908-09.

	Men	Women		Men	Women
Abcess:			Fracture:		
Alveolar .....	....	2	Lower jaw .....	1	....
Arm .....	1	....	Fibula .....	1	....
Ear .....	....	1	Fibula, tibia .....	1	....
Foot .....	1	....	Glands:		
Neck .....	1	....	Cervical .....	....	1
Scalp .....	1	....	Inguinal .....	1	....
Tonsils .....	1	2	Hemorrhoids .....	1	....
Adenoidectomy .....	2	2	Hernia .....	2	1
Amputation, Fingers ....	1	....	Mastoiditis .....	1	....
Appendectomy .....	1	1	Orchidectomy .....	1	....
Bone:			Paracentesis:		
Sacrum, tubercular ....	1	....	Eardrum .....	2	1
Tibia, wired .....	....	1	Chest .....	2	2
Ulna, Typhoid necrosis ....	....	1	Rectum, prolapsed .....	1	....
Circumcision .....	5	....	Tendons, sutured .....	2	....
Coccyx, excision .....	....	3	Tonsillectomy .....	5	8
Dislocations, Shoulder....	1	....	Uterus .....	....	1
			Web fingers .....	1	....
Total .....				38	27

## DISPENSARY SUMMARIES, 1908-09.

	Men	Women	Total
Individuals treated .....	1,161	567	1,818
Number of treatments .....	9,175	4,541	13,716
Number of cases .....	2,502	1,100	3,602
Number of days open (August 10, 1908-May 13, 1909).....			276
Average number of patients treated daily .....			49.7
Average number of treatments per patient .....			7.0
Visits at students' homes .....			51
Percentage of students treated .....			58.9
Percentage of graduating class, 1909, treated at the Infirmary since its opening, January, 1906 .....			81.2
Other cases not seen by the University staff .....			???
Number of prescriptions .....			563



## MEDICAL EXCUSES.

Number of students concerned .....	838	503
Per cent of students excused .....	43.8	42.8
Number of excuses issued .....	2,328	1,039
Days lost .....	6,530	3,012

## DISPENSARY CASES TREATED SURGICALLY, 1908-09.

	Men	Women		Men	Women
Cysts .....	2	....	Infections:		
Dislocations, Finger .....	2	1	Ear .....	1	....
Fractures:			Eyelid .....	5	4
Clavicle .....	....	1	Face .....	10	16
Coccyx .....	....	5	Finger .....	18	12
Finger .....	2	....	Foot .....	10	....
Hand .....	1	....	Hand .....	16	3
Jaw .....	1	....	Heel .....	10	1
Leg .....	1	1	Hip .....	1	....
Nose .....	8	....	Leg .....	2	....
Olecranon .....	....	1	Neck .....	2	....
Rib .....	5	....	Nose .....	1	1
Hemorrhoids .....	3	....	Throat .....	2	1
Infections:			Toe .....	5	3
Arm .....	4	....	Warts .....	28	10
Back .....	2	....	Mole .....	2	1
Boils .....	68	17	Tumor .....	2	2
Corn .....	....	1	Wen .....	2	....
Total .....				216	81

## DISPENSARY, 1908-09. MEN.

## NUMBER OF CASES.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Appendicitis	....	1	....	....	....	....	2	....	....	1	4
Asthma	1	....	2	1	2	....	3	....	....	....	9
Bronchitis	6	10	15	15	5	12	18	20	6	1	108
Constipation	....	8	8	3	3	6	5	5	9	1	48
Digestion, of the	2	30	26	14	5	8	10	15	15	4	129
Diphtheria	....	....	1	....	....	....	1	....	1	....	3
Dislocation	1	....	1	....	....	....	....	1	2	....	5
Ear, of the	6	8	13	6	7	5	5	6	10	2	68
Eye, of the	8	9	8	11	4	6	11	8	10	2	77
Flatfoot	3	5	5	....	5	4	2	....	1	2	27
Fractures	1	5	10	....	....	1	2	1	1	....	21
Headache	4	2	6	5	1	4	4	2	3	....	31
Heart, of the	1	3	....	1	....	1	2	1	3	2	14
Hernia	6	1	....	3	....	....	....	....	1	....	11
Infections	19	17	22	19	18	20	24	35	24	9	207
Injuries	18	38	40	36	14	19	30	45	30	4	274
Malaria	2	3	....	2	1	....	1	1	1	....	11
Measles	....	1	....	....	....	....	1	....	....	....	2
Miscellaneous	20	39	30	22	14	23	18	28	14	10	218
Mumps	....	....	1	....	1	....	....	5	4	....	11
Neuralgia	4	2	4	1	1	3	1	4	1	1	22
Neurasthenia	2	5	2	3	....	2	1	3	1	1	20
Nose and Throat, of	46	42	56	60	33	35	67	96	50	18	503
Pleurisy	2	2	2	1	....	....	....	....	....	....	7
Poison Oak	1	13	5	5	5	2	7	11	9	6	64
Skin, of the	21	30	34	27	12	17	23	29	28	12	233
Sprains	5	17	17	21	3	9	14	23	10	3	122
Teeth, of the	1	3	2	1	1	1	3	2	4	2	20
Tonsillitis	6	7	14	8	7	9	11	10	10	3	85
Tuberculosis:											
of the Lungs	1	....	....	1	1	....	1	....	1	1	6
of the Bladder	....	....	....	1	....	....	....	....	1	....	2
of the Glands	1	1	....	....	....	....	....	....	....	....	2
Vaccination	81	29	6	4	....	12	4	1	1	....	138
	269	331	330	271	143	199	271	352	251	85	2502

## DISPENSARY, 1908-09. MEN.

## COLLEGES.

DISEASES	L.	S.S.	N.S.	Com.	Agr.	Mec.	Min.	C.E.	Chem.	Med.	Total
Appendicitis	....	1	....	....	....	2	1	....	....	....	4
Asthma	....	3	3	....	....	2	....	....	1	....	9
Bronchitis	4	20	16	16	12	11	16	12	1	....	108
Constipation	2	14	2	4	5	7	1	12	....	1	48
Digestion, of the	....	24	14	16	10	21	17	20	2	5	129
Diphtheria	....	....	....	1	1	....	....	1	....	....	3
Dislocation	....	1	....	2	2	....	....	....	....	....	5
Ear, of the	3	10	3	6	4	14	14	10	3	1	68
Eye, of the	4	12	4	10	5	20	12	8	1	1	77
Flatfoot	1	8	5	1	1	5	2	4	....	....	27
Fractures	....	3	2	1	5	3	5	1	....	1	21
Headache	....	9	1	3	4	7	2	4	1	....	31
Heart, of the	2	2	2	....	....	2	5	1	....	....	14
Hernia	....	1	3	3	....	2	....	2	....	....	11
Infections	6	48	15	20	20	32	24	36	3	3	207
Injuries	11	53	28	23	33	36	42	45	2	1	274
Malaria	....	....	1	2	....	2	1	5	....	....	11
Measles	....	....	....	2	....	....	....	....	....	....	2
Miscellaneous	6	41	22	19	14	40	41	28	6	1	218
Mumps	....	3	1	....	1	2	3	1	....	....	11
Neuralgia	1	4	2	3	3	1	4	4	....	....	22
Neurasthenia	1	2	1	2	3	5	3	2	1	....	20
Nose and Throat, of	10	95	45	71	49	89	60	68	6	10	503
Pleurisy	....	1	....	1	....	1	....	4	....	....	7
Poison Oak	2	13	4	4	5	10	19	7	....	....	64
Skin, of the	3	33	21	33	21	50	30	35	6	1	233
Sprains	4	23	11	16	8	24	19	13	2	2	122
Teeth, of the	1	1	2	5	2	4	3	2	....	....	20
Tonsillitis	3	15	7	15	7	14	12	12	....	....	85
Tuberculosis:											
of the Lungs	3	1	1	....	....	....	....	1	....	....	6
of the Bladder	....	....	1	....	1	....	....	....	....	....	2
of the Glands	....	....	1	....	....	....	....	....	1	....	2
Vaccinations	7	21	14	18	15	30	11	21	1	....	138
	74	462	232	297	231	436	347	359	37	27	2502

## DISPENSARY, 1908-09. MEN.

## CLASSES.

DISEASES	1st year	2nd year	3rd year	4th year	Grad.	Total
Appendicitis	2	1	1	....	....	4
Asthma	6	2	1	....	....	9
Bronchitis	39	25	19	17	8	108
Constipation	23	10	9	5	1	48
Digestion, of the	49	31	27	16	6	129
Diphtheria	1	....	....	1	1	3
Dislocations	....	3	....	2	....	5
Ear, of the	27	14	11	12	4	68
Eye, of the	25	21	11	15	5	77
Flatfoot	14	7	4	2	....	27
Fractures	10	2	1	7	1	21
Headache	17	7	3	4	....	31
Heart, of the	3	4	2	4	1	14
Hernia	9	....	2	....	....	11
Infections	77	52	39	30	9	207
Injuries	101	63	61	38	11	274
Malaria	5	1	3	2	....	11
Measles	2	....	....	....	....	2
Miscellaneous	98	38	38	31	13	218
Mumps	8	2	1	....	....	11
Neuralgia	11	3	4	1	3	22
Neurasthenia	7	4	7	2	....	20
Nose and Throat, of the	197	141	78	67	20	503
Pleurisy	4	2	....	....	1	7
Poison Oak	19	18	9	14	4	64
Skin, of the	88	62	42	35	6	233
Sprains	61	29	20	12	....	122
Teeth, of the	8	5	3	3	1	20
Tonsillitis	40	25	10	8	2	85
Tuberculosis of Lungs	1	....	2	....	3	6
Tuberculosis of Bladder	1	1	....	....	....	2
Tuberculosis of Glands	1	....	1	....	....	2
Vaccination	116	10	3	1	8	138
	<hr/> 1070	<hr/> 583	<hr/> 412	<hr/> 329	<hr/> 108	<hr/> 2502

## DISPENSARY, 1908-09. WOMEN.

## NUMBER OF CASES.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Appendicitis	....	....	....	....	....	1	....	....	....	....	1
Anaemia	1	....	....	....	....	....	....	....	....	....	1
Bronchitis	2	1	....	4	....	....	....	1	1	1	10
Constipation	....	2	3	2	....	1	1	2	1	1	13
Digestion, of the	5	19	12	12	3	10	15	17	7	1	101
Diphtheria	....	....	1	....	....	....	....	....	....	....	1
Dislocations	....	....	1	....	....	....	....	1	....	....	2
Ear, of the	3	5	1	2	3	4	2	4	1	1	26
Eye, of the	1	8	5	10	4	2	6	9	4	....	49
Flatfoot	....	2	1	....	....	....	1	2	....	....	6
Fractures	1	2	....	2	2	....	....	1	....	....	8
Headache	1	9	5	6	1	4	1	6	4	....	37
Hernia	....	1	....	....	....	....	....	....	....	....	1
Infections	9	6	8	6	3	6	9	11	7	4	69
Injuries	7	10	10	5	5	5	5	6	2	3	58
Measles	....	....	....	....	....	1	....	....	....	....	1
Miscellaneous	1	12	8	9	3	7	16	11	5	5	77
Mumps	....	....	....	....	....	....	....	1	....	....	1
Neuralgia	1	2	1	1	....	1	4	5	3	2	20
Neurasthenia	....	....	....	....	....	....	2	....	....	....	2
Nose and Throat, of	21	47	29	29	19	22	50	41	18	8	284
Pleurisy	....	....	1	1	....	....	....	....	....	....	2
Poison Oak	....	1	3	5	1	1	3	8	1	....	23
Skin, of the	5	20	11	10	4	5	13	9	5	3	85
Sprains	2	7	6	6	2	2	3	6	2	2	38
Teeth, of the	....	4	1	....	....	2	....	3	2	....	12
Tonsillitis	3	2	2	1	....	1	1	....	1	....	11
Tuberculosis:											
of the Lungs	....	....	1	....	....	....	....	....	....	....	1
of the Glands	....	....	....	....	....	....	....	1	....	....	1
Vaccinations	72	4	....	....	....	12	3	....	....	....	91
Women, of	6	8	9	6	5	6	9	10	7	2	68
	141	172	119	117	55	93	144	155	71	33	1100



## DISPENSARY, 1908-09. WOMEN.

## COLLEGES.

DISEASES	L.	S.S.	N.S.	Com.	Agr.	Mec.	Min.	C.E.	Chem.	Med.	Total
Appendicitis	....	1	....	....	....	....	....	....	....	....	1
Anaemia	....	....	1	....	....	....	....	....	....	....	1
Bronchitis	....	8	2	....	....	....	....	....	....	....	10
Constipation	....	13	....	....	....	....	....	....	....	....	13
Digestion, of the	12	76	10	1	1	....	....	....	1	....	101
Diphtheria	1	....	....	....	....	....	....	....	....	....	1
Dislocations	1	1	....	....	....	....	....	....	....	....	2
Ear, of the	6	17	2	....	....	....	....	....	1	....	26
Eye, of the	8	33	6	....	....	....	....	....	1	1	49
Flatfoot	....	6	....	....	....	....	....	....	....	....	6
Fractures	....	6	2	....	....	....	....	....	....	....	8
Headache	2	30	4	....	....	....	....	....	1	....	37
Hernia	1	....	....	....	....	....	....	....	....	....	1
Infections	11	50	6	....	....	....	....	....	2	....	69
Injuries	12	36	9	....	....	....	....	....	1	....	58
Measles	....	....	....	....	....	....	....	....	1	....	1
Miscellaneous	8	61	6	1	1	....	....	....	....	....	77
Mumps	....	1	....	....	....	....	....	....	....	....	1
Neuralgia	1	19	....	....	....	....	....	....	....	....	20
Neurasthenia	1	....	1	....	....	....	....	....	....	....	2
Nose and Throat, of	25	220	34	....	1	....	....	....	1	3	284
Pleurisy	1	1	....	....	....	....	....	....	....	....	2
Poison Oak	4	14	5	....	....	....	....	....	....	....	23
Skin, of the	13	57	12	....	3	....	....	....	....	....	85
Sprains	1	34	2	....	....	....	....	....	1	....	38
Teeth, of the	....	10	1	....	....	....	....	....	1	....	12
Tonsillitis	....	8	2	....	....	....	....	....	....	1	11
Tuberculosis:											
of the Lungs	....	1	....	....	....	....	....	....	....	....	1
of the Bladder	....	....	....	....	....	....	....	....	....	....	....
of the Glands	....	....	1	....	....	....	....	....	....	....	1
Vaccinations	7	74	10	....	....	....	....	....	....	....	91
Women, of	6	52	9	....	....	....	....	....	1	....	68
	121	829	125	2	6	....	....	....	12	5	1100

## DISPENSARY, 1908-09. WOMEN.

## CLASSES.

DISEASES	1st year	2nd year	3rd year	4th year	Grad.	Total
Appendicitis	....	....	....	1	....	1
Anaemia	....	....	....	....	1	1
Bronchitis	3	1	2	1	3	10
Constipation	6	2	3	....	2	13
Digestion, of the	33	17	19	13	19	101
Diphtheria	....	....	1	....	....	1
Dislocations	2	....	....	....	....	2
Ear, of the	10	5	4	6	1	26
Eye, of the	21	2	10	8	3	49
Flatfoot	6	....	....	....	....	6
Fractures	3	2	1	2	....	8
Headache	14	10	7	4	2	37
Hernia	1	....	....	....	....	1
Infections	28	17	9	11	4	69
Injuries	18	10	13	11	6	58
Measles	1	....	....	....	....	1
Miscellaneous	34	13	10	8	12	77
Mumps	....	....	....	1	....	1
Neuralgia	2	3	5	6	4	20
Neurasthenia	....	....	....	1	1	2
Nose and Throat, of the	89	70	49	42	34	284
Pleurisy	....	....	....	1	1	2
Poison Oak	4	5	4	5	5	23
Skin, of the	38	15	15	4	13	85
Sprains	14	13	4	3	4	38
Teeth, of the	7	3	....	2	....	12
Tonsillitis	3	3	3	1	1	11
Tuberculosis of Lungs	....	....	....	....	1	1
Tuberculosis of Glands	....	....	....	....	1	1
Vaccinations	73	8*	1	....	9	91
Women, of	32	13	13	6	4	68
	<hr/> 442	<hr/> 217	<hr/> 173	<hr/> 137	<hr/> 131	<hr/> 1100



EXCUSES ISSUED TO MEN ON ACCOUNT OF ILLNESS, 1908-1909,  
AS RELATED TO DIFFERENT COLLEGES AND CLASSES.

DISEASES	S.S.	C.E.	Min.	M.E.	N.S.	Agr.	Com.	L.	Chem.	Total	1st yr.	2nd yr.	3rd yr.	4th yr.	Grad.	Total
Appendicitis	2	...	2	2	1	1	1	...	...	9	3	4	1	...	1	9
Asthma	8	1	3	1	2	...	...	...	...	15	10	3	1	1	...	15
Bronchitis	35	17	19	16	24	32	23	3	1	170	79	53	24	12	2	170
Constipation	6	4	2	2	...	...	1	4	1	21	9	9	1	2	...	21
Digestion, of the	56	27	25	34	32	23	43	5	4	249	107	89	35	16	2	249
Diphtheria	...	1	...	...	...	...	...	...	...	1	...	...	...	1	...	1
Ear, of the	4	2	8	6	...	...	6	...	...	26	11	10	4	...	1	26
Eye, of the	10	1	5	9	6	4	4	4	...	43	18	16	9	...	...	43
Flat-foot	3	...	2	3	2	2	...	...	...	12	7	3	2	...	...	12
Fractures	...	2	...	...	...	3	...	...	...	5	3	...	...	2	...	5
Headache	22	17	15	25	5	12	23	6	1	126	56	44	22	4	...	126
Infections	26	13	23	27	9	16	25	1	9	149	81	46	13	8	1	149
Injuries	71	59	55	60	43	61	53	8	9	419	217	137	45	19	1	419
Malaria	...	8	2	4	4	1	2	...	...	21	6	6	4	5	...	21
Measles	1	...	...	1	...	...	6	...	...	8	7	1	...	...	...	8
Miscellaneous	18	15	18	17	16	13	23	...	...	120	63	41	12	3	1	120
Mumps	3	3	4	4	5	1	...	...	...	20	16	2	1	...	1	20
Neuralgia	2	2	3	...	2	...	2	...	1	12	4	5	2	1	...	12
Nose and Throat, of the	82	43	60	70	46	32	87	12	13	445	192	180	59	13	1	445
Paratyphoid	1	1	...	1	...	...	...	...	...	3	...	2	...	1	...	3
Pleurisy	...	2	2	1	...	...	2	...	...	7	4	2	1	...	...	7
Pneumonia	2	...	...	...	...	...	...	...	...	2	1	...	1	...	...	2
Poison Oak	3	6	14	2	1	1	2	...	3	32	8	12	4	8	...	32
Scarlet Fever	...	...	...	...	...	1	...	...	...	1	1	...	...	...	...	1
Skin, of the	4	2	4	5	3	1	14	...	1	34	22	10	1	1	...	34
Sprains	22	21	6	23	14	6	35	3	1	131	80	34	14	3	...	131
Surgical	9	1	3	6	3	...	7	1	2	32	13	10	5	4	...	32
Teeth, of the	13	11	6	17	1	3	16	2	1	70	34	27	5	4	...	70
Tonsillitis	13	15	12	14	8	8	20	4	2	96	47	31	10	7	1	96
Tuberculosis of Lungs	1	...	1	...	1	...	...	...	...	3	...	...	3	...	...	3
Tuberculosis of Bladder	...	...	...	...	5	2	...	...	...	7	2	5	...	...	...	7
Vaccinations	9	7	4	6	6	1	4	2	...	39	35	4	...	...	...	39





DAYS LOST IN EXCUSES ISSUED TO WOMEN ON ACCOUNT OF  
ILLNESS, 1908-09.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Asthma	....	....	1	....	....	....	....	....	....	....	1
Bronchitis	....	13	8	10	....	6	41	69	22	....	16
Constipation	....	4	1	1	....	....	2	....	....	....	4
Digestion, of the	2	59	57	59	3	41	52	23	86	....	38
Diphtheria	....	....	22	29	....	....	....	....	....	....	5
Ear, of the	....	10	1	3	....	....	2	....	2	....	1
Eye, of the	....	30	15	2	....	1	24	9	7	....	8
Headache	1	33	49	61	1	6	59	69	12	....	29
Infections	4	16	12	6	....	4	6	7	6	....	6
Influenza	....	11	....	....	....	10	10	29	....	....	6
Injuries	4	1	25	32	....	....	1	3	....	....	6
Measles	....	....	....	....	....	16	....	18	....	....	3
Menstruation	7	71	75	67	11	26	81	96	57	....	49
Miscellaneous	....	3	54	12	....	13	32	10	3	....	12
Mumps	....	....	....	....	....	....	....	18	18	....	2
Neuralgia	....	15	6	3	....	5	19	11	7	....	6
Nose and Throat, of	3	19	68	83	4	35	164	130	61	....	56
Pneumonia	....	....	....	13	....	....	....	....	....	....	1
Poison Oak	10	5	9	1	....	12	....	24	....	....	6
Skin	....	4	....	....	....	....	....	....	....	....	4
Sprains	....	11	16	29	8	1	14	16	....	....	9
Surgical	....	4	9	31	....	19	24	5	42	1	15
Teeth	....	5	3	12	4	2	6	6	2	....	4
Tonsillitis	1	4	27	18	5	19	7	13	7	....	10
Tuberculosis of Lungs	....	....	....	....	....	19	....	....	....	....	1
Vaccinations	12	7	....	....	....	5	4	....	....	....	2
	44	325	458	472	36	240	548	556	332	1	307

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Excus.	Person	Outside Physician	University Physician	No Physician
Asthma	...	...	1	...	...	...	...	...	...	...	1	1	...	...	...
Bronchitis	...	3	4	3	...	4	8	10	4	...	36	31	3	11	22
Constipation	...	3	1	1	...	...	2	...	...	...	7	6	...	...	7
Digestion, of the	2	19	23	18	1	9	24	14	18	...	128	105	10	25	93
Diphtheria	...	...	1	1	...	...	...	...	...	...	2	2	...	...	...
Ear, of the	...	2	...	2	...	...	...	...	2	...	6	6	2	3	1
Eye, of the	...	9	7	2	...	1	5	4	2	...	30	26	7	8	15
Headache	1	16	29	23	1	5	31	34	12	...	152	116	...	11	141
Infections	1	5	2	2	...	1	2	3	2	...	18	16	3	8	7
Influenza	1	...	...	...	...	1	1	2	1	...	6	6	2	2	2
Injuries	1	1	3	5	...	...	1	2	...	...	13	10	1	7	5
Measles	...	...	...	...	...	2	...	1	...	...	3	3	...	2	1
Menstruation	7	33	45	38	6	16	46	49	27	...	267	178	...	15	252
Miscellaneous	...	3	11	5	...	4	8	5	3	...	39	32	3	14	22
Mumps	...	...	...	...	...	...	...	...	1	...	3	3	...	3	...
Neuralgia	...	3	4	3	...	1	4	3	2	...	20	19	...	6	14
Nose and Throat, of the	3	8	31	30	1	12	53	44	15	...	197	170	12	61	124
Pneumonia	...	...	1	...	...	...	...	...	...	...	1	1	1	...	...
Poison Oak	1	1	2	1	...	1	...	5	...	...	11	11	...	7	4
Skin, of the	...	1	...	...	...	...	...	...	...	...	1	1	...	1	...
Sprains	...	2	4	7	1	1	5	3	...	...	23	21	...	16	7
Surgical	...	1	1	2	...	3	2	1	2	1	13	9	5	6	2
Teeth, of the	...	2	3	6	1	2	2	3	1	...	20	17	...	...	20
Tonsillitis	1	1	3	4	1	6	2	4	2	...	24	20	5	6	13
Tuberculosis of Lungs	...	...	...	...	...	2	...	...	...	...	2	2	1	1	...
Vaccinations	7	4	...	...	...	3	2	...	...	...	16	14	...	16	...
	24	118	175	154	12	74	98	189	94	1	1039	826	56	231	752

Counted more than once.....323

Individuals receiving excuses.....503

EXCUSES ISSUED TO WOMEN ON ACCOUNT OF ILLNESS, 1908-1909,  
AS RELATED TO DIFFERENT COLLEGES AND CLASSES.

DISEASES	S.S.	N.S.	L.	Agr.	Chem. Com.	Total	1st yr.	2nd yr.	3rd yr.	4th yr.	Grad.	Total
Asthma	1	...	...	...	...	1	...	1	...	...	...	1
Bronchitis	25	5	6	...	...	36	16	8	7	3	2	36
Constipation	7	...	...	...	...	7	1	1	5	...	...	7
Digestion, of the	98	8	20	...	1	128	52	35	22	14	5	128
Diphtheria	1	...	1	...	...	2	1	...	1	...	...	2
Ear, of the	7	...	1	...	...	8	5	1	2	...	...	8
Eye, of the	27	2	...	...	1	30	14	8	7	1	...	30
Headache	126	10	15	...	1	152	72	41	22	13	4	152
Infections	14	...	3	...	1	18	9	7	2	...	...	18
Influenza	6	...	...	...	...	6	1	2	3	...	...	6
Injuries	13	...	...	...	...	13	8	2	2	1	...	13
Measles	1	...	1	...	1	3	3	...	...	...	...	3
Menstruation	214	28	23	...	1	267	96	86	41	35	9	267
Miscellaneous	26	5	7	1	...	39	15	10	10	3	1	39
Mumps	3	...	...	...	...	3	1	...	1	1	...	3
Neuralgia	18	2	...	...	...	20	3	8	3	5	1	20
Nose and Throat, of the	145	24	27	1	...	197	79	61	39	15	3	197
Pneumonia	1	...	...	...	...	1	...	1	...	...	...	1
Poison Oak	8	2	1	...	...	11	2	1	2	3	3	11
Skin	...	...	1	...	...	1	1	...	...	...	...	1
Sprains	21	1	...	...	1	23	10	7	4	2	...	23
Surgical	9	2	1	...	1	13	3	5	2	1	2	13
Teeth, of the	15	2	3	...	...	20	7	6	3	2	2	20
Tonsillitis	20	...	3	...	...	23	11	7	1	3	1	23
Tuberculosis of Lungs	2	...	...	...	...	2	...	...	...	2	...	2
Vaccinations	15	...	1	...	...	16	13	2	...	1	...	16
	827	91	114	2	7	1039	422	298	178	105	36	1039

## MEDICAL EXAMINATIONS OF NEW STUDENTS, 1909-10.

	Men	Women		Men	Women
anaemia .....	---	8	Skin, diseased .....	218	27
chest deformity .....	60	138	Spine:		
feet, weak arches .....	193	218	Antero-posterior .....	71	14
General condition:			Lateral curve .....	52	113
Excellent .....	26	21	Teeth, poor .....	227	150
Good .....	243	171	Throat, diseased .....	180	179
Average .....	419	181	Thyroid, enlarged .....	7	56
Fair .....	85	78	Unvaccinated .....	179	98
Poor .....	18	17	Varicocele .....	138	---
Heart, abnormal .....	58	8	History of:		
Hernia .....	23	---	Chicken pox .....	240	306
Kidneys, abnormal .....	3	10	Diphtheria .....	55	37
Menstrual disorders .....	---	159	Malaria .....	91	16
Nose, diseased .....	96	13	Measles .....	338	417
Operations:			Mumps .....	376	207
Appendicitis .....	17	3	Pneumonia .....	74	36
Circumcision .....	79	---	Rheumatism .....	36	3
Nose .....	37	11	Scarlet fever .....	126	109
Pelvis .....	---	4	Small pox .....	17	12
Throat .....	67	49	Tuberculosis .....	5	2
Shoulders:			Typhoid .....	75	42
Right lower .....	185	111	Whooping cough .....	337	308
Left lower .....	26	34			
Stooped .....	67	118			
Students examined .....				791	468
Total .....					1,259

## INFIRMARY, 1909-10.

DISEASES	Men	Women	DISEASES	Men	Women
Appendicitis .....	7	....	Mumps .....	4	3
Asthma .....	5	....	Myalgia .....	2	....
Bronchitis .....	38	9	Neuralgia .....	....	1
Chicken pox .....	3	1	Neurasthenia .....	2	4
Digestion, of the .....	21	25	Nose and Throat, of the	62	28
Diphtheria .....	1	..	Pleurisy .....	....	1
Dislocations .....	1	....	Pneumonia .....	10	1
Ear, of the .....	5	....	Poison oak .....	4	7
Epilepsy .....	1	....	Scarlet fever .....	1	....
Erysipelas .....	3	.	Skin, of the .....	2	....
Eye, of the .....	4	....	Sprains .....	8	2
Fractures .....	4	....	Tonsillitis .....	42	10
Heart, of the .....	1	1	Tuberculosis of Glands ..	1	....
Infections .....	17	4	Tuberculosis of Kidney..	2	....
Injuries .....	6	1	Tuberculosis of Lungs....	3	1
Jaundice .....	6	2	Typhoid .....	2	....
Malaria .....	13	....	Vaccinia .....	6	1
Measles .....	11	5	Women, of .....	....	2
Measles, German .....	13	8	Whooping cough .....	....	2
Miscellaneous .....	22	4			
Total .....				333	123
Discharged, Well .....				251	99
"    Relieved .....				80	23
"    Not relieved .....				2	1
Total .....				333	123
Total number of Infirmary days .....					2,578
Number of days open .....					281
Total number of patients .....					456
Average stay in days .....					5.
Average number of patients per day .....					9.
Operations .....					34
University Physicians' visits .....					3,191
Number of prescriptions .....					25



## OPERATIONS, 1909-10.

	Men	Women		Men	Women
Abscess:			Infections:		
Alveolar .....	2	....	Ankle .....	1	....
Buttock .....	2	....	Elbow .....	1	....
Groin .....	1	....	Knee .....	1	....
Leg .....	1	....	Thumb .....	1	....
Neck .....	1	....	Toe .....	2	....
Rectal .....	1	....	Wrist .....	1	....
Tonsil .....	1	....	Lacerations, Scalp .....	1	....
Appendicitis .....	3	....	Otitis Media .....	1	....
Circumcision .....	1	....	Paracentesis, Chest .....	1	....
Dislocation, Shoulder ....	1	....	Pelvic .....	....	1
Fracture:			Punctured wound: Foot		
Clavicle .....	3	....	Tonsillectomy .....	1	2
Rib .....	1	....			
Total .....				31	3

## DISPENSARY SUMMARIES, 1909-10.

	Men	Women	Total
Individuals treated .....	1,468	804	2,272
Number of treatments .....	12,519	6,106	18,625
Number of cases .....	3,021	1,442	4,463
Number of days open .....			281
Average number of patients treated daily .....			66.3
Average number of treatments per patient .....			8.2
Visits at students' homes .....			47
Percentage of students treated .....			77.0
Percentage of graduating class, 1910, treated at the Infirmary since its opening, January, 1907 .....			93.8
Other cases not seen by the University staff .....			???
Number of prescriptions .....			643

## DISPENSARY CASES TREATED SURGICALLY, 1909-10.

	Men	Women		Men	Women
Cysts .....	2	....	Infections:		
Dislocations:			Boils .....	122	18
Clavicle .....	1	....	Corn .....	28	20
Finger .....	3	1	Face .....	2	5
Shoulder .....	2	....	Finger .....	11	6
Thumb .....	1	....	Foot .....	7	2
Fractures:			Hand .....	4	3
Arm .....	1	....	Heel .....	5	2
Clavicle .....	3	....	Leg .....	6	1
Coccyx .....	1	....	Neck .....	1	2
Finger .....	1	....	Toe .....	7	3
Hand .....	2	....	Warts .....	80	19
Rib .....	3	....	Injuries .....	36	8
Wrist .....	....	1	Mole .....	1	....
Hemorrhoids .....	1	....	Tumor .....	1	....
Infections:			Uvula .....	2	....
Abscess .....	7	....	Wen .....	2	....
Back .....	....	2			
Total .....				343	93

## DISPENSARY, 1909-10. MEN.

## NUMBER OF CASES.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Appendicitis	1	2	3	....	....	2	1	....	....	....	9
Asthma	1	4	1	1	....	1	....	1	2	....	11
Bronchitis	15	20	11	15	3	6	9	8	10	4	101
Digestion, of the	19	40	22	23	10	16	28	22	28	17	223
Diphtheria	....	....	....	....	....	....	....	....	....	....	....
Dislocations	2	2	2	....	....	1	....	....	....	....	7
Ear, of the	2	12	5	4	...	4	10	8	6	3	54
Eye, of the	5	4	32	22	6	18	19	32	22	9	169
Flatfoot	1	....	2	2	....	1	....	4	2	....	12
Fracture	1	3	4	....	....	....	....	1	1	....	10
Headache	2	4	1	2	....	1	2	4	4	2	22
Heart, of the	....	2	....	....	2	2	....	1	2	....	9
Hemorrhoids	2	....	....	2	....	4	....	1	2	2	13
Hernia	1	2	1	2	....	3	....	2	....	....	11
Infections	25	40	31	21	20	32	22	22	23	15	251
Injuries	25	46	42	33	11	25	30	35	47	24	319
Malaria	2	1	1	....	....	....	3	1	....	2	10
Measles	1	....	....	1	....	1	1	6	11	....	21
Miscellaneous	14	22	19	12	11	17	16	14	26	13	164
Mumps	1	....	....	1	3	....	1	....	1	....	7
Neuralgia	....	2	4	2	1	....	2	1	1	....	13
Neurasthenia	....	4	2	4	1	....	1	3	2	1	18
Nose and Throat, of	36	49	87	95	38	59	102	105	74	34	679
Pleurisy	....	....	....	....	....	1	....	1	....	....	2
Pneumonia	1	....	....	....	....	....	....	....	1	....	2
Poison Oak	3	9	5	8	7	7	11	7	10	7	74
Skin, of the	18	46	40	28	17	34	31	32	46	23	315
Sprains	12	18	15	11	2	11	19	25	15	10	138
Teeth, of the	....	5	4	4	3	....	4	4	....	2	26
Tonsillitis	5	18	11	15	3	12	9	15	20	1	109
Tuberculosis:											
of the Glands	....	....	1	....	....	....	....	....	....	....	1
of the Kidney	....	....	1	....	....	....	....	....	....	....	1
of the Lungs	....	....	....	1	....	....	1	....	1	....	3
of the Throat	....	....	....	1	....	....	....	....	....	....	1
Vaccinations	167	6	5	....	....	35	2	....	....	....	215
Whooping cough	....	....	....	....	....	....	....	1	....	....	1
Total	362	361	355	310	138	294	322	355	355	168	3021

## DISPENSARY, 1909-10. MEN.

## COLLEGES.

DISEASES	L.	S.S.	N.S.	Com.	Agr.	Mec.	Min.	C.E.	Chem.	Med.	Total
Appendicitis	....	3	2	1	2	....	....	1	....	....	9
Asthma	....	4	1	....	....	1	3	....	2	....	11
Bronchitis	2	14	10	15	9	15	18	16	1	1	101
Digestion, of the	4	54	27	24	21	32	22	30	4	5	223
Diphtheria	....	....	....	....	....	....	....	....	....	....	....
Dislocations	....	....	....	2	....	....	2	2	1	....	7
Ear, of the	4	7	11	3	2	9	8	8	1	1	54
Eye, of the	4	22	25	20	18	29	21	22	4	4	169
Flatfoot	1	2	2	3	....	2	1	1	....	....	12
Fracture	....	2	....	3	1	3	....	1	....	....	10
Headache	2	5	....	2	1	4	2	6	....	....	22
Heart, of the	1	4	1	....	....	3	....	....	....	....	9
Hemorrhoids	....	5	1	2	1	2	1	1	....	....	13
Hernia	....	3	....	....	1	4	1	2	....	....	11
Infection	5	34	20	34	33	40	55	25	3	2	251
Injuries	4	62	43	33	23	62	45	35	7	5	319
Malaria	....	....	....	2	4	....	2	2	....	....	10
Measles	....	2	5	4	2	4	3	....	....	1	21
Miscellaneous	5	33	25	12	19	16	20	31	1	2	164
Mumps	....	2	1	2	....	1	....	1	....	....	7
Neuralgia	....	2	2	2	1	4	2	....	....	....	13
Neurasthenia	2	6	2	....	2	2	....	2	1	1	18
Nose and Throat, of	24	141	98	90	66	88	75	81	9	7	679
Pleurisy	....	....	....	....	....	....	....	2	....	....	2
Pneumonia	....	....	1	....	....	....	....	1	....	....	2
Poison Oak	1	16	9	6	4	13	17	7	1	....	74
Skin, of the	7	69	38	46	32	47	36	35	2	3	315
Sprains	2	27	21	15	15	29	16	11	2	....	138
Teeth, of the	....	5	3	5	2	3	4	3	1	....	26
Tonsillitis	3	14	12	14	15	22	15	12	....	2	109
Tuberculosis:											
of the Glands	....	1	....	....	....	....	....	....	....	....	1
of the Lungs	....	2	....	....	....	1	....	....	....	....	3
of the Kidney	....	....	....	....	....	1	....	....	....	....	1
of the Throat	....	1	....	....	....	....	....	....	....	....	1
Vaccinations	5	33	37	27	22	36	30	21	3	1	215
Whooping Cough	....	....	1	....	....	....	....	....	....	....	1
Total	76	575	398	367	296	473	399	359	43	35	302

## DISPENSARY, 1909-10. MEN.

## CLASSES.

DISEASES	1st year	2nd year	3rd year	4th year	Grad.	Total
Appendicitis	3	2	2	2	....	9
Asthma	3	5	2	1	....	11
Bronchitis	38	30	18	9	6	101
Digestion, of the	101	52	30	28	12	223
Diphtheria	....	....	....	....	....	....
Dislocations	2	3	1	1	....	7
Ear, of the	17	17	8	9	3	54
Eye, of the	47	51	27	30	14	169
Flatfoot	5	5	1	....	1	12
Fracture	4	1	2	2	1	10
Headache	11	4	3	4	....	22
Heart, of the	6	1	1	1	....	9
Hemorrhoids	8	2	....	2	1	13
Hernia	3	5	....	3	....	11
Infections	85	73	37	43	13	251
Injuries	132	88	43	42	14	319
Malaria	1	4	5	....	....	10
Measles	7	7	2	5	....	21
Miscellaneous	58	41	31	23	11	164
Mumps	1	3	1	2	....	7
Neuralgia	7	2	2	2	....	13
Neurasthenia	8	4	2	4	....	18
Nose and Throat, of the	293	161	106	77	42	679
Pleurisy	1	1	....	....	....	2
Pneumonia	1	1	....	....	....	2
Poison Oak	20	17	16	14	7	74
Skin, of the	132	84	52	33	14	315
Sprains	65	40	12	16	5	138
Teeth, of the	15	5	....	4	2	26
Tonsillitis	58	24	12	10	5	109
Tuberculosis of Glands	....	1	....	....	....	1
Tuberculosis of Kidney	....	....	....	1	....	1
Tuberculosis of Lungs	2	....	....	1	....	3
Tuberculosis of Throat	1	....	....	....	....	1
Vaccinations	183	18	5	3	6	215
Whooping Cough	1	....	....	....	....	1
Total	1419	754	420	371	155	3021



## DISPENSARY, 1909-10. WOMEN.

## NUMBER OF CASES.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Anaemia	1	....	....	1	....	1	1	....	....	....	4
Bronchitis	....	2	....	1	....	....	1	....	....	....	4
Digestion, of the	9	26	29	11	7	12	15	23	23	6	161
Dislocation	....	....	1	....	....	....	....	....	....	....	1
Ear, of the	....	2	4	4	3	6	4	2	4	....	29
Eye, of the	5	5	16	6	2	10	12	10	6	7	79
Flatfoot	4	3	1	....	....	2	2	....	1	....	13
Fracture	....	....	....	....	1	....	....	1	1	....	3
Headache	1	6	8	1	....	3	4	6	....	....	29
Heart, of the	....	1	....	....	....	....	1	....	....	....	2
Infections	7	7	10	7	4	18	12	8	5	1	79
Injuries	5	9	10	7	6	9	13	6	10	2	77
Measles	....	....	....	1	....	....	1	2	1	2	7
Measles, German	....	....	....	....	....	....	1	1	....	....	2
Miscellaneous	6	13	11	5	5	12	10	8	4	4	78
Mumps	1	....	....	....	....	....	1	....	....	....	2
Neuralgia	....	1	2	1	....	1	1	1	....	....	7
Neurasthenia	....	....	1	1	....	....	....	....	....	....	2
Nose and Throat, of	33	57	55	54	13	65	54	44	35	19	429
Poison Oak	3	3	1	5	4	....	10	4	9	3	42
Skin, of the	6	16	11	13	6	20	15	12	14	5	113
Sprains	2	3	10	3	2	5	4	6	6	1	42
Teeth, of the	2	2	2	....	2	2	1	1	1	2	15
Tonsillitis	5	7	4	4	1	6	5	2	....	1	35
Tuberculosis:											
of the Glands	....	....	....	....	1	....	....	....	....	....	1
of the Lungs	....	....	....	....	....	1	....	....	....	....	1
Vaccinations	89	3	....	1	1	12	2	....	....	....	108
Women, of	4	14	17	10	....	4	8	6	6	3	72
Totals	183	180	193	136	58	189	178	143	126	56	144

## DISPENSARY, 1909-10. WOMEN.

## COLLEGES.

DISEASES	L.	S.S.	N.S.	Com.	Agr.	Mec.	Min.	C.E.	Chem.	Med.	Total
Anaemia	1	2	1	....	....	....	....	....	....	....	4
Bronchitis	1	3	....	....	....	....	....	....	....	....	4
Digestion, of the	32	103	23	1	1	....	....	....	1	....	161
Dislocations	....	....	1	....	....	....	....	....	....	....	1
Ear, of the	2	22	5	....	....	....	....	....	....	....	29
Eye, of the	7	55	16	1	....	....	....	....	....	....	79
Flatfoot	2	9	1	....	1	....	....	....	....	....	13
Fracture	1	1	1	....	....	....	....	....	....	....	3
Headache	1	26	2	....	....	....	....	....	....	....	29
Heart, of the	....	2	....	....	....	....	....	....	....	....	2
Infections	12	50	16	....	....	....	....	....	....	1	79
Injuries	7	54	14	....	....	....	....	....	1	1	77
Measles	....	6	1	....	....	....	....	....	....	....	7
Measles, German	1	1	....	....	....	....	....	....	....	....	2
Miscellaneous	10	58	8	....	....	....	....	....	1	1	78
Mumps	....	1	1	....	....	....	....	....	....	....	2
Neuralgia	1	6	....	....	....	....	....	....	....	....	7
Neurasthenia	....	2	....	....	....	....	....	....	....	....	2
Nose and Throat, of	51	287	80	2	4	....	....	....	3	2	429
Poison Oak	10	23	9	....	....	....	....	....	....	....	42
Skin, of the	16	82	17	....	1	....	....	....	2	....	118
Sprains	4	26	11	1	....	....	....	....	....	....	42
Teeth, of the	....	12	3	....	....	....	....	....	....	....	15
Tonsillitis	5	24	6	....	....	....	....	....	....	....	35
Tuberculosis:											
of the Glands	....	1	....	....	....	....	....	....	....	....	1
of the Lungs	....	....	....	1	....	....	....	....	....	....	1
Vaccinations	9	85	14	....	....	....	....	....	....	....	108
Women, of	10	44	18	....	....	....	....	....	....	....	72
Total	183	985	248	6	7	....	....	....	8	5	1442

## DISPENSARY, 1909-10. WOMEN.

## CLASSES.

DISEASES	1st year	2nd year	3rd year	4th year	Grad.	Total
Anaemia	3	....	1	....	....	4
Bronchitis	1	2	....	....	1	4
Digestion, of the	62	26	27	25	21	161
Dislocations	1	....	....	....	....	1
Ear, of the	15	3	4	6	1	29
Eye, of the	23	23	13	16	4	79
Flatfoot	7	4	....	1	1	13
Fracture	2	....	....	....	1	3
Headache	10	7	6	4	2	29
Heart, of the	1	....	....	1	....	2
Infections	28	11	17	16	7	79
Injuries	29	18	13	15	2	77
Measles	1	3	1	2	....	7
Measles, German	....	1	....	....	1	2
Miscellaneous	33	13	8	16	8	78
Mumps	2	....	....	....	....	2
Neuralgia	4	1	1	1	....	7
Neurasthenia	1	1	....	....	....	2
Nose and Throat, of the	154	102	62	65	46	429
Poison Oak	16	7	8	9	2	42
Skin, of the	47	24	24	15	8	118
Sprains	14	11	7	6	4	42
Teeth, of the	6	2	3	3	1	15
Tonsillitis	18	4	5	5	3	35
Tuberculosis of Glands	....	1	....	....	....	1
Tuberculosis of Lungs	1	....	....	....	....	1
Vaccinations	97	4	1	....	6	108
Women, of	39	15	6	8	4	72
Total	615	283	207	214	123	1442

## MEDICAL EXCUSES.

	Men	Women
Number of students concerned .....	977	609
Per cent. of students excused .....	52.3	56.0
Number of excuses issued .....	2817	1568
Days lost .....	7326	4046

DAYS LOST IN EXCUSES ISSUED TO MEN ON ACCOUNT OF  
ILLNESS, 1909-10.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Appendicitis	....	2	61	5	....	5	47	21	....	....	141
Asthma	....	8	....	4	....	4	3	4	1	....	24
Bronchitis	11	99	23	77	....	15	65	58	81	....	429
Chicken-pox	....	....	....	....	....	22	22	....	....	....	44
Digestion, of the	37	106	127	113	4	29	60	68	95	3	642
Diphtheria	....	....	....	....	....	....	....	23	1	....	24
Ear, of the	....	7	7	2	....	....	13	25	1	....	55
Eye, of the	3	27	11	27	3	8	18	50	10	....	157
Headache	4	30	36	29	....	17	25	30	26	1	198
Infections	29	153	88	69	9	53	44	66	25	4	540
Injuries	20	81	132	61	2	71	91	98	92	6	654
Malaria	14	41	2	....	....	2	9	3	....	....	71
Measles	3	....	....	....	....	45	39	96	82	6	271
Miscellaneous	8	199	78	69	9	30	79	82	113	....	667
Mumps	5	15	....	....	40	....	30	....	....	....	90
Neuralgia	1	3	12	3	....	1	9	3	7	....	39
Nose and Throat, of	21	123	162	219	8	111	345	177	150	1	1317
Pneumonia	....	....	....	....	....	....	51	15	10	....	76
Poison Oak	....	28	15	4	1	2	11	6	8	1	76
Skin, of the	10	35	11	11	4	25	26	24	25	1	172
Sprains	21	153	139	137	4	40	167	148	92	10	911
Surgical	3	20	1	5	....	75	79	10	21	....	214
Teeth, of the	....	4	11	2	1	6	9	5	10	....	48
Tonsillitis	15	62	71	55	6	18	12	38	48	....	325
Tuberculosis of the Glands	....	11	1	....	....	....	9	1	28	....	50
Vaccination	33	33	3	2	....	17	3	....	....	....	91
Total	238	1240	991	894	91	596	1266	1051	926	33	7326

EXCUSES ISSUED TO MEN ON ACCOUNT OF ILLNESS, 1909-1910.  
AS RELATED TO DIFFERENT COLLEGES AND CLASSES.

DISEASES	S.S.	C.E.	Min.	M.E.	N.S.	Ag.	Com.	L.	Chem.	Total	1st yr.	2nd yr.	3rd yr.	4th yr.	P.G.	Total
Appendicitis	2	....	1	1	2	....	6	....	....	12	6	2	3	1	....	12
Asthma	1	....	2	1	8	....	....	....	....	12	1	10	....	1	....	12
Bronchitis	30	10	10	6	21	13	18	1	....	109	41	44	18	6	....	109
Chicken-pox	....	1	1	....	....	....	....	....	....	2	....	....	2	....	....	2
Digestion, of the	78	36	32	34	62	34	65	9	7	357	157	135	39	26	....	357
Diphtheria	....	....	....	....	....	....	2	....	....	2	....	2	....	....	....	2
Ear, of the	3	6	....	4	4	5	5	3	....	30	8	6	7	9	....	30
Eye, of the	7	9	7	7	10	9	10	2	5	66	33	25	5	3	....	66
Headache	39	11	10	15	25	26	32	11	1	170	81	66	12	10	1	170
Infections	30	21	37	23	10	19	22	8	8	178	58	71	34	11	4	178
Injuries	40	32	27	34	35	31	59	2	7	267	122	126	15	4	....	267
Malaria	5	2	....	1	2	3	4	....	....	17	3	11	3	....	....	17
Measles	3	3	2	3	8	2	5	1	....	27	9	10	3	5	....	27
Miscellaneous	17	11	18	22	21	36	29	1	1	156	78	49	19	10	....	156
Mumps	2	1	....	1	1	1	1	....	....	7	1	3	2	1	....	7
Neuralgia	4	2	1	5	2	3	2	1	....	20	11	4	4	1	....	20
Nose and Throat, of the	131	62	70	109	116	94	107	25	15	729	345	251	88	39	6	729
Pneumonia	1	1	1	....	....	3	....	....	....	6	1	3	1	1	....	6
Poison Oak	8	3	....	1	9	6	....	1	....	28	8	11	5	4	....	28
Skin, of the	14	5	4	17	21	18	28	1	....	108	56	37	12	3	....	108
Sprains	52	18	39	40	46	42	45	1	1	284	138	124	15	7	....	284
Surgical	4	....	3	12	1	3	2	2	....	27	6	15	5	1	....	27
Teeth, of the	9	3	8	6	9	6	1	1	1	44	15	17	10	2	....	44
Tonsillitis	15	5	18	13	12	16	21	1	1	102	50	35	11	4	2	102
Tuberculosis of Glands	2	....	....	3	....	....	....	....	....	5	....	3	....	2	....	5
Vaccinations	8	2	5	9	10	6	10	1	....	51	43	4	4	....	....	51
TOTALS	1000	444	544	644	744	844	944	1044	1144	1244	1344	1444	1544	1644	1744	1844



DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Excus.	Persons	Outside		No
													Physician	University Physician	
Appendicitis	1	4	1	1	1	3	2	2	....	....	12	8	4	7	1
Asthma	4	....	2	2	2	1	2	1	....	....	12	7	....	8	4
Bronchitis	7	20	10	23	....	5	16	16	12	....	109	82	13	73	23
Chicken-pox	....	....	....	....	1	1	....	....	....	....	2	1	1	1	....
Digestion, of the	12	67	73	56	4	20	38	42	42	3	357	233	18	131	208
Diphtheria	....	....	....	....	....	....	....	1	1	....	2	2	....	2	....
Ear, of the	6	6	1	....	....	8	8	1	....	....	30	22	3	24	3
Eye, of the	3	9	9	17	2	7	7	5	....	....	66	59	17	30	19
Headache	4	24	27	27	....	14	21	29	23	1	170	129	3	41	126
Infections	7	36	35	23	6	15	16	24	13	3	178	113	14	137	27
Injuries	13	43	50	32	2	13	36	37	38	4	268	178	6	170	92
Malaria	5	6	1	....	....	1	3	1	....	....	17	12	5	11	1
Measles	1	....	....	....	....	4	4	7	10	1	27	27	4	22	1
Miscellaneous	7	21	25	12	6	10	18	21	26	....	156	90	35	96	25
Mumps	1	1	....	....	3	....	2	....	....	....	7	7	1	4	2
Neuralgia	1	3	4	3	....	1	3	1	4	....	20	19	2	11	7
Nose and Throat, of	13	69	105	131	5	55	167	107	85	1	728	451	27	486	215
Pneumonia	....	....	....	....	....	....	4	1	1	....	6	5	....	6	....
Poison Oak	5	5	2	1	2	3	2	7	1	....	28	18	2	23	3
Skin, of the	6	10	6	9	....	16	19	16	25	1	108	81	2	106	....
Sprains	11	48	47	30	2	14	33	57	36	7	285	164	10	147	128
Surgical	1	2	1	1	....	3	6	3	10	....	27	19	9	15	3
Teeth, of the	....	4	11	2	1	5	7	5	9	....	44	33	....	....	....
Tonsillitis	7	20	18	18	2	6	8	8	15	....	102	85	10	71	21
Tuberculosis	....	....	....	....	....	....	....	....	....	....	....	....	....	....	....
of the Glands	1	1	....	....	....	1	1	1	1	....	5	3	....	4	1
Vaccination	18	17	3	2	....	10	1	....	....	....	51	39	....	30	21
Total	117	417	441	392	34	205	426	398	365	22	2817	1885	187	1656	974
	Counted more than once .....											908			
	Individuals receiving excuses .....											977			

DAYS LOST IN EXCUSES ISSUED TO WOMEN ON ACCOUNT OF  
ILLNESS, 1909-10.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Total
Appendicitis	....	....	5	16	....	....	....	....	....	....	21
Bronchitis	6	26	1	....	....	8	80	16	....	....	137
Digestion, of the	17	60	95	54	4	29	118	56	37	....	470
Ear, of the	3	....	2	....	....	2	1	....	....	....	8
Eye, of the	5	18	18	13	1	8	3	38	2	....	106
Headache	3	28	50	61	2	30	76	59	46	....	355
Infections	....	....	....	....	....	....	....	7	16	....	23
Injuries	....	....	43	20	....	23	4	9	1	....	100
Measles	....	....	....	3	....	16	26	23	14	....	82
Menstruation	10	111	161	63	15	91	190	147	94	....	882
Miscellaneous	6	18	15	30	....	14	58	49	37	....	227
Mumps	....	....	....	....	....	....	22	8	....	....	30
Neuralgia	....	12	11	17	....	16	6	8	11	....	81
Nose and Throat, of	15	82	122	150	5	100	272	229	96	....	1071
Poison Oak	....	27	11	23	....	3	24	....	6	....	94
Sprains	....	4	....	....	....	4	16	51	....	....	75
Surgical	....	....	20	22	....	31	2	9	4	....	88
Teeth, of the	....	7	11	2	1	4	2	5	11	7	50
Tonsillitis	5	10	4	38	....	8	49	14	5	....	133
Vaccination	7	6	....	....	....	....	....	....	....	....	13
Total	77	409	569	512	28	387	949	728	380	7	4046

EXCUSES ISSUED TO WOMEN ON ACCOUNT OF ILLNESS, 1909-10.  
AS RELATED TO DIFFERENT COLLEGES AND CLASSES.

DISEASES	S.S.	N.S.	L.	Agr.	Chem.	Com.	Total	1st yr.	2nd yr.	3rd yr.	4th yr.	Grad.	Total
Appendicitis	1	...	1	...	...	...	2	...	...	1	1	...	2
Bronchitis	12	8	3	...	...	...	23	5	11	4	2	1	23
Digestion, of the	151	28	23	4	...	3	209	118	46	22	17	6	209
Ear, of the	3	1	...	...	...	...	4	4	...	...	...	...	4
Eye, of the	32	5	6	2	...	...	45	17	16	6	5	1	45
Headache	103	76	34	...	...	...	213	117	60	25	11	...	213
Infections	3	3	1	...	...	...	7	2	...	4	1	...	7
Injuries	23	7	3	...	...	...	33	17	10	6	...	...	33
Measles	8	1	3	...	...	...	12	1	4	2	4	1	12
Menstruation	223	174	49	...	...	...	446	219	128	47	46	6	446
Miscellaneous	38	10	10	...	...	...	58	29	14	6	9	...	58
Mumps	2	1	...	...	...	...	3	2	1	...	...	...	3
Neuralgia	21	9	...	...	...	...	30	20	4	2	3	1	30
Nose and Throat, of the	269	69	31	3	1	...	373	153	121	47	47	5	373
Poison Oak	10	6	2	...	...	...	18	4	7	3	4	...	18
Sprains	10	2	4	...	...	...	16	4	8	3	1	...	16
Surgical	7	5	2	1	...	...	15	11	...	3	...	1	15
Teeth, of the	16	8	2	...	...	...	26	18	3	1	4	...	26
Tonsillitis	19	3	4	...	...	...	26	8	11	3	3	1	26
Vaccination	6	2	1	...	...	...	9	7	2	...	...	...	9
Total	957	418	179	10	1	3	1568	756	446	185	158	23	1568

## EXCUSES ISSUED TO WOMEN ON ACCOUNT OF ILLNESS, 1909-10.

DISEASES	Aug.	Sept.	Oct.	Nov.	Dec.	Jan.	Feb.	Mar.	Apr.	May	Excus.	Persons	Outside Physician	University Physician	No Physician
Appendicitis	...	...	1	1	...	...	...	...	...	...	2	2	2	...	...
Bronchitis	2	4	1	...	...	2	12	2	...	...	23	14	1	16	6
Digestion, of the	6	30	40	28	2	12	46	26	19	...	209	190	25	70	114
Ear, of the	1	...	1	...	...	1	1	...	...	...	4	4	2	1	1
Eye, of the	2	6	10	8	1	4	1	12	1	...	45	29	9	19	17
Headache	2	17	32	38	2	18	35	36	33	...	213	196	2	62	149
Infections	...	...	...	...	...	...	...	2	5	...	7	7	1	5	1
Injuries	...	...	15	4	...	7	3	3	1	...	33	16	4	23	6
Measles	...	...	...	1	...	2	3	4	2	...	12	12	4	7	1
Menstruation	7	55	75	61	9	45	59	92	43	...	446	256	1	37	408
Miscellaneous	4	7	6	8	...	7	11	10	5	...	58	45	8	25	25
Mumps	...	...	...	...	...	...	1	2	...	...	3	3	...	2	1
Neuralgia	...	4	6	7	...	3	3	3	4	...	30	16	4	17	9
Nose and Throat, of	7	32	59	65	2	39	77	60	32	...	373	269	13	211	129
Poison Oak	3	2	5	...	...	1	5	...	2	...	18	14	2	13	3
Sprains	...	2	...	...	...	1	3	10	...	...	16	15	2	10	4
Surgical	...	...	3	3	...	3	1	3	2	...	15	11	9	3	3
Teeth, of the	...	5	3	2	1	3	2	3	6	1	26	24	...	...	...
Tonsillitis	1	2	1	7	...	4	6	4	1	...	26	24	3	20	3
Vaccination	7	2	...	...	...	...	...	...	...	...	9	9	1	8	...
Total	42	168	258	233	17	152	269	272	156	1	1568	1156	113	549	906

Counted more than once ..... 547

Individuals receiving excuses ..... 609

SUMMER SESSION, INFIRMARY, 1908-09.

DISEASES	Men	Women	DISEASES	Men	Women
Bronchitis .....	1	....	Neurasthenia .....	....	1
Digestion .....	1	1	Poison oak .....	....	1
Hemorrhage .....	....	1	Synovitis, knee .....	....	1
Injury .....	1	....	Tonsillitis .....	....	1
Malaria .....	1	....		—	—
				4	6
				—	—
Total .....					10
				Men	Women
Discharged, Well .....				2	3
“ Relieved .....				2	3
				—	—
				4	6
				—	—
Total .....					10
Total number of hospital days .....					35
Number of days open .....					41
Total number of patients .....					10
University Physicians' visits .....					39

## SUMMER SESSION, DISPENSARY, 1908-09.

## NUMBER OF CASES.

DISEASES	Men	Women	DISEASES	Men	Women
Bronchitis .....	1	1	Miscellaneous .....	6	4
Constipation .....	1	1	Neurasthenia .....	...	1
Digestion .....	2	1	Nose and Throat .....	12	5
Ear, of the .....	1	2	Poison oak .....	5	2
Eye, of the .....	1	1	Skin .....	13	4
Heart .....	...	1	Sprain .....	5	2
Infection .....	7	1	Teeth .....	2	...
Injury .....	15	2	Tonsillitis .....	1	1
Measles .....	...	1	Women, of .....	...	2
				<hr/>	<hr/>
				72	32
				<hr/>	<hr/>
Total .....					104

SUMMER SESSION, DISPENSARY, 1908-09.

## SUMMARIES.

	Men	Women	Total
Individuals treated .....	72	32	104
Number of treatments .....	249	92	341
Number of cases .....	75	35	110
Number of days open .....			41
Average number of patients treated daily .....			8.3
Average number of treatments per patient .....			3.3





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The following abbreviations are used: Agr. (Agriculture), Am. (American), anthrop. (anthropology), ass'n (association), bldg. (building), Cal. (California), cf'd (compared), dept. (department), gov't (government), lab. (laboratory), libr. (library), L. O. (Lick Observatory), L. A. (Los Angeles), N. S. G. W. (Native Sons of the Golden West), prof. (professor), publ. (publications), S. F. (San Francisco), U. C. (University of California), univ. (university), U. S. (United States).

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The following abbreviations are used:

Am. (American); Ass'n (Association); bldg. (building); Co. (company); dept. (department); Hist. (Historical); Hon. (Honourable); Libr. (Library); L. O. (Lick Observatory); L. A. (Los Angeles); Prof. (Professor); publ. (publications); univ. (university); U. C. (University of California); S. F. (San Francisco).



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## REPORT OF THE PRESIDENT OF THE UNIVERSITY

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UNIVERSITY OF CALIFORNIA,

BERKELEY, November 30, 1912.

*To His Excellency, Hiram Warren Johnson,  
Governor of the State of California.*

SIR: I have the honor to report that the attendance of students in the colleges at Berkeley for the year 1911-12, exclusive of the summer session, presented a total of 4,112 as compared with 3,352 two years earlier and 2,669 in the year 1903. Of this attendance of 4,112, 2,539 were men and 1,573 were women. This means 61.7 per cent of men as compared with 56.7 per cent in 1903, an increase of 5 per cent in the proportion of men. The percentage of male students steadily increased from 1903 up to 1911, since which time there has been a slight decline. It must be expected that the restriction now coming to be exercised at Stanford University in the number of women students will naturally be felt in an increased number with us, though this will be to some extent offset by the establishment of junior colleges in connection with the larger high schools of the state, experience having shown that the women are more likely to remain at home and attend the junior college than are the men.

The graduate students enrolled in the colleges at Berkeley for the year 1911-12 number 578 as compared with an attendance of 425 in 1909-10 and 219 in 1903. The proportion of candidates for teachers' certificates among the graduate students has in recent years shown rapid decline. As late as 1909 the women

were still in the majority among the graduate students. In 1912 there were 311 men and 267 women. The tendency among the graduate students is now definitely shapen toward higher scientific work and preparation for the career of college teacher and investigator.

Among the colleges at Berkeley the chief gain in the number of students is found in the college of agriculture. This shows in 1912 an attendance of 372 as against 197 two years earlier and 42 in 1900-01. In these last two years the number of students in the college of agriculture has nearly doubled. During the same time the increase in all the Berkeley colleges taken together was 760 or 23 per cent. While the colleges at Berkeley taken as a whole gained thus during the two years 23 per cent, the three general colleges of letters and sciences gained 31 per cent; the college of commerce gained 20 per cent; the college of agriculture gained 88 per cent. During the same time the college of mechanics gained 5 per cent; civil engineering was practically at a standstill; the college of mining declined in numbers by 34 per cent. The college of commerce has maintained for several years a steady and healthy growth at this rate of 20 per cent in two years. The number of graduate students has during the same period increased 36 per cent.

Within the two years the three technical colleges have declined in attendance from 822 to 766, the college of mining alone having declined from 243 to 160. The requirements for the development and training of an engineer are increasingly more exacting with the years. Nowadays a man who is wise does not undertake an engineering course unless he loves mathematics and physics, and unless he surely has the talents and the courage to push his way through to his engineership. In earlier years it was not unusual for men to enter engineering in default of any well-defined purpose in any other direction. In 1903 the college of mining had 11 per cent of all undergraduates; in 1912 it had only  $4\frac{1}{2}$  per cent. Civil engineering and mechanical and electrical engineering, which for this nine year period maintained a fairly stable proportion, have relatively declined during the past three



years. Of 1,323 graduates in engineering between the years 1873 and 1909, 836, that is 63 per cent, have pursued engineering occupations; whereas of 152 agricultural graduates only 39 per cent are found to have pursued agricultural activities.

Perhaps the fairest comparison of the different colleges would be made by incorporating the college of commerce with the general colleges of letters and sciences. We then find that while the total of the Berkeley colleges together has grown in the past two years by 23 per cent, the four general colleges have grown by 29 per cent, the technical colleges have lost 23 per cent and the agricultural college has gained 88 per cent. This gives the real situation in compactest form.

The total attendance at the university proper, including the professional colleges, is found to be for the year 1911-12, 4,702 as compared with 3,860 in 1909-10. If we include the attendance on the summer session, deducting all duplicate registrations, we have a total attendance of 6,392 as compared with 4,510 in 1910 and 5,122 in 1911. The rate of growth in the whole university seems to have been in recent years about 13 per cent a year.

The above figures do not include the farm school at Davis, having at present an attendance of about 150, nor the Wilmerding school, 230, nor the short courses in agriculture, nor the farmers' institutes, the agricultural train and the correspondence courses in agriculture, though all are supported from the treasury of the university and charged against the funds concerning which it has to render account.

It must be remembered, furthermore, that the figures given above deal with nothing later than the year 1911-12, though at the time of writing this report the university is well started upon its year 1912-13, at the beginning of which the attendance in the colleges at Berkeley is about 500 greater than at the same time one year earlier; and the attendance in the university at large is about 730 greater. The total number who will during the year 1912-13 receive class instruction under the auspices of the university will not be less than 8,000. Figures representing the attendance at the leading American universities as of date Nov-

ember 1, 1911, and reduced as far as possible to a commensurate basis, have been collected by Dr. Rudolf Tombo, Jr., and were published in *Science* (Vol. XXXIV, No. 888, p. 21, January 5, 1912) :

NET TOTAL ATTENDANCE, NOVEMBER 1, 1911, INCLUDING  
SUMMER SESSION, BUT DEDUCTING DUPLICATES

1. Columbia	7,938	15. Syracuse	3,307
2. California	5,724	16. Yale	3,224
3. Harvard	5,674	17. Missouri	2,596
4. Cornell	5,609	18. Texas	2,539
5. Michigan	5,452	19. Kansas	2,265
6. Chicago	5,390	20. Indiana	2,154
7. Pennsylvania	5,220	21. Tulane	2,040
8. Wisconsin	5,015	22. Iowa	1,967
9. Illinois	4,929	23. Stanford	1,648
10. New York	4,005	24. Princeton	1,543
11. Minnesota	3,773	25. Western Reserve	1,331
12. Ohio State	3,567	26. Cincinnati	1,324
13. Nebraska	3,459	27. Johns Hopkins	1,057
14. Northwestern	3,438	28. Virginia	804

The homes from which our students come are distributed among the counties of the state with an irregularity often departing widely from the allotment which the population of the counties could claim. Counties containing a large urban population fail notably to secure the allotment which belongs to them. San Francisco, having  $17\frac{1}{2}$  per cent of the population of the state, has in 1912 but 9.9 per cent of new incoming students; Los Angeles, with 21.2 per cent of the population, 16.3 per cent of incoming students; whereas Riverside county, quite as far away, claims with 1.5 per cent of the population place for 2.2 per cent of incoming students.

The following counties send a proportion of students exceeding their claim by population: Lake, Mendocino, Colusa, Shasta, Tehama, Yolo, Yuba, Alameda, Contra Costa, Napa, Solano, Madera, Stanislaus, Tulare, Santa Cruz, Riverside, Santa Barbara, Amador, Eldorado. If we reckon by the school from which

the students come rather than from the home, then there are to be added Sonoma, Sutter, Marin, San Mateo, Nevada, Placer. All of the southern California counties except Orange claim a larger proportion of what is their due than San Francisco. As will be naturally expected, a disproportionately large number appear in the records as admitted from the high school in Berkeley. Thus in August, 1912, 116 entered the university from this school out of a total of about 1,200. Of these 116, 15 had spent but one year at this school, 17 but two, 13 but three, and 12 had entered the school from grammar schools other than those in Berkeley; that is to say, 57 out of the 116, or about one-half, came in from outside localities within the four preceding years. It seems evident from these figures that while it has not yet become a practice for students from homes outside Berkeley to be prepared at the Berkeley high school, it is nevertheless common for families having children to educate to remove for the time being to Berkeley.

Professor Carl C. Plehn has at my request made an estimate of the expense to the university of educating each student in the colleges at Berkeley. So many factors are involved in such an estimate that only approximate results can be obtained. The method employed in the estimate was to calculate as closely as possible the amount which would be saved to the university if there were no students at all, the university nevertheless continuing every other one of its activities, such as scientific research, publication, public service, etc. This amount, which is reckoned at \$893,207.26, was then divided by the estimated total number of regular students for the current year, 4,675, with the result of \$191.30 of expense per student.

As this whole number of students, 4,675, will naturally not be in residence during the whole year, the quotient should be somewhat larger; and, as Professor Plehn says, "\$200 per student will be as close to the facts as it will be possible to come." This includes no allowance for the use of what may be called the plant, viz., grounds, buildings, equipment, and no allowance for new equipment purchased during the year. If we were then to add

to our total dividend the interest on our investment in plant and equipment the cost per student would be nearer \$400 a year than \$200. The average cost per student for the colleges at Berkeley taken as a whole we have found, therefore, to be in round figures \$200. It appears, however, that the average cost in agriculture and the engineering colleges is about \$250, leaving the average in the colleges outside of agriculture and engineering about \$175.

The instruction of an increased number of students involves inevitably an increase of the total expense. A sudden increase in the number of students such as has taken place in the last two years may for a time, through increase in the size of the classes and by crowding in the lecture halls, proceed without proportionate increase of expense; but it is a fallacy and weakness to suppose that the increase will not assert itself,—finally it will assert itself not only in the need for increased instruction but in that for buildings for which our average increase of \$200 per student cannot provide. An increase of 500 in the number of students, such as has come to us this year, means inevitably a call for \$100,000 a year in addition to the provision for simple instruction. Most other universities levy a tuition fee either openly or in a more or less disguised form: Harvard \$150 per year; Yale \$150 per year with \$18 for graduation expenses; the Massachusetts Institute of Technology \$250 per year. So also the University of Illinois collects an “incidental fee” of \$24 with a matriculation fee of \$10 and a diploma fee of \$5; the University of Michigan an “annual fee” of \$30 for residents and \$40 for non-residents, and in addition thereto a matriculation fee of \$10 for residents and \$25 for non-residents, and in engineering a fee of \$45 for residents and \$55 for non-residents; Wisconsin an “incidental fee” of \$24 for residents and \$70 for non-residents; the University of Minnesota \$20 for residents and \$40 for non-residents, and \$30 for the resident engineering students and \$60 for non-residents.

The levying of a tuition fee means that those who attend a university are called upon to pay a portion of what their education costs the institution giving it. If we should adopt a tuition



fee it would not mean that the state had ceased providing university education; it would merely mean that while the state continues to provide university education for whose support all are taxed, whether they send children to the university or not, those who avail themselves of the state's provision will pay as a guarantee of good faith and appreciation some proportion of the cost, it may be a fourth, it may be an eighth. I should deplore the introduction of a tuition fee however logical it may be. We all know that there are many students who can perfectly well afford it, but I have seen too much of the struggles to which many others are subjected in earning their way through college, and too much of the service such men are likely to render society in their later lives to approve placing any further hindrance in their way. But if it becomes finally evident that the maintenance of the university as it should be maintained represents too heavy a burden for the state, this may be our only way of relief.

In case a tuition fee should be introduced a fair proportion of the resultant increase of income could be applied to the founding of scholarships for needy and deserving students. As for illustration, if \$50 a year were charged 5,000 students this would yield \$250,000 a year. If from this amount \$25,000 were set apart it would provide 200 scholarships yielding the present amount of the California and Strauss Scholarships, \$125. One value of the tuition fee would be that students who are floating into a college course through lack of any definite purpose elsewhere would probably be eliminated. Those who come here would think twice before entering. There are students now who come to college simply because the high school course is completed and the next thing seems to be to enter college. On the other hand it must not be overlooked that the university has been declared a constituent part of the public school system within which the state has provided free education. The people generally so conceive of the university and believe that the state can well afford to establish this mechanism. Whenever heretofore, as in 1898, the regents have proposed to levy a tuition fee public opinion seems to have uttered its voice in opposition, and chiefly for the reason



that the people regard the university as part and parcel of the public school system.

There follows here a statement concerning the sources and amount of the university's receipts during the two years for which this report is rendered:

#### FINANCIAL STATEMENT CONCERNING SOURCES AND AMOUNT OF RECEIPTS

	1910-11	1911-12
Available for current expenses of the year.....	\$1,228,947.60	\$1,309,772.72
Gross receipts .....	\$1,672,716.67	\$2,277,402.17
From which must be deducted in order to obtain the true income available for cur- rent expenses of the year the following sums:		
First, The income of the Wilmerding en- dowment .....	30,399.58	29,395.72
Second, Gifts for endowments, scholarships, astronomical and other scientific expedi- tions, in general, having no direct rela- tion to university instruction.....	108,613.16	568,419.68
Third, Permanent improvement in building, etc., being one-fourth of three cent tax....	177,693.39	190,131.92
Fourth, Special state appropriation for build- ings and equipment at university farm, and at Riverside, Whittier, and Los Angeles (medical) .....	44,225.85	77,583.17
Fifth, Receipts from fees in the summer session .....	37,313.06	46,827.28
Sixth, Lick Observatory salaries and expenses	31,782.55	31,870.20
Seventh, Income on investment added to prin- cipal .....	13,741.48	23,401.48

Of the amount available for the current expenses of the year 1910-11, viz., \$1,228,947.60, there was expended \$37,357.49 on building operations other than those provided for in the permanent building fund, and of the amount available in the year 1911-12, viz., \$1,309,772.72, there was expended \$16,566.56 for such building operations.

	1910-11	1911-12
Available for current expenses of the year.....	\$1,228,947.60	\$1,309,772.72

## Sources of this income:

First, Received from the United States government under head of Morrill College Aid Fund and Agricultural Experiment Station funds (Hatch and Adams).....		
	75,000.00	80,000.00
Second, Proceeds of the three cent tax applicable to current expenses, being three-fourths of the total amount thereof.....		
	533,080.16	570,395.78
Third, Special appropriations of the state:		
Special support .....	\$100,000.00	
Special appropriation reimbursing loss of income.....	40,828.50	
Special appropriation for agriculture .....	107,730.96	
Chair of music .....	3,000.00	
Printing .....	6,000.00	257,559.46
<hr/>		
Special support .....	\$100,000.00	
Special appropriation reimbursing loss of income.....	31,000.00	
Special appropriation for agriculture .....	147,497.48	
Chair of music .....	2,998.22	
Printing .....	4,900.62	286,396.32
<hr/>		
Fourth, Income on invested funds and rents on real estate .....		
	127,458.63	102,093.19
Fifth, Laboratory deposits of students, sale of farm and agricultural produce and miscellaneous items .....		
	235,849.35	270,887.43

Of the sums above set forth only the following were available for education and research in Berkeley, that is, at the university proper :

1910-11	1911-12
\$1,013,403.95	\$1,051,861.38

Private gifts for the establishment of permanent endowments amounted in 1910-11 to \$33,759.50 and in the year 1911-12 to \$450,943.94.

It is to be noted that in the year 1911-12 we expended for maintenance of the agricultural department \$73,766.89 on buildings, equipment, improvements, and live stock and \$323,864.30 on salaries, expenses, investigations, etc., making a total of \$397,631.19. The total expenses at the university farm at Davis

alone were \$186,518.61, of which \$58,539.32 were spent on buildings, improvements, equipment, and live stock. Of this total amount expended at the university farm \$108,906.86 was derived from state appropriations. During the year to come if the plans already adopted by the regents are carried out the total expenditure will reach fully \$500,000.

Thirteen years ago we were conducting the department of agriculture with an expenditure of \$56,000. It was, however, in its scope totally inadequate to the proper claims of the state. It was doing excellent work in the chemistry of soils and in horticulture, but it had not touched the great fields which are opening before the agricultural education of today. In the United States there are 66 agricultural and mechanical colleges which have come into existence as the result of the Morrill Land Grant Act. Their total joint revenue in 1895 was \$5,178,580.00; in 1910 it was \$21,572,581.00. During these 15 years these 66 colleges showed 125 per cent of increase in property, 400 per cent increase in revenue, and 500 per cent increase in the number of students. It is evident that in regard to the development of our agricultural schools in the future our minds must be made up for great things. The masses of our people have become convinced that for the real necessities of their life they are receiving genuine aid from these agricultural colleges. The public is willing to support them.

The disproportionate growth of our cities means that a heavy responsibility is thrown upon our agricultural communities to feed them. In 1890 our urban population constituted 36.1 per cent and our rural population 63.9 per cent of the whole. By 1910, that is in 20 years, these figures had shifted so that the urban population was 46.3 per cent and the rural 53.7 per cent. In the decade 1900 to 1910 the United States increased in population by about sixteen millions. Of this total increase about 70 per cent was in cities and only about 30 per cent in rural territory. Figures like this mean danger. Such shifting as this within so short a period means an utter reorganization of our life. Such things have never happened in the history of the world. The fearful increase in cost of living is in part at least a result of this dislodgment as between the city and country. The solu-

tion of the difficulty will only be found in the more intelligent use of the land. In any case it has become the established policy of the regents to develop the agricultural department of the university to its fullest extent in the belief that no department of the university can prove quite so direct and immediate an application of its endeavors to the well-being of the community.

Hesitation regarding the proper development of the agricultural department in past years was chiefly due to uncertainty of policy and division of opinion as to the place where the agricultural college could best be located and as to the character of work it should offer. What was for years in the haze has now come out into clarity. The two parties who debated the question of location, one favoring the country and the other favoring the site of the university at Berkeley, were both right. Both their policies will in the future be pursued. There is now no doubt that the central residence of the agricultural college should be at Berkeley. No one who is acquainted fully with the situation today has, so far as I know, any doubt about that. No one would think of removing the mining college to the mining districts. Students who intend to become mining engineers work at the university during the sessions and then make off into the hills for their practical experience in the mines during the summer. Civil engineers have their surveying camp on the hills above Santa Cruz. It is now clear that our agricultural students will have afforded them even a fuller opportunity than this to enter into direct relation with the actual processes of the farm. Their fundamental education, however, will be obtained in the case of all of them at Berkeley. The sciences fundamental to agriculture are taught agriculturists in the same form and manner in which they are taught to prospective mechanical engineers. It is an advantage to bring all those who require these subjects together at the university. This avoids duplication, assures the best teachers and the best methods. It ensures the atmosphere of vigor and research which positively cannot be maintained in the isolation of a small local school. After the student has acquired in his first two years the fundamental subjects, he will, according to the subject in which he specializes, obtain a considerable proportion of



the education of the following years in Davis, in Fresno, or in Riverside. If, for instance, his work is to be in animal husbandry he would go to Davis; if in plant propagation or citrus culture to Riverside; if in viticulture to Fresno.

It was doubtless the expectation of the farmers who were aroused into enthusiasm by the Morrill acts and the foundation of the agricultural colleges which ensued that these colleges would afford an opportunity for a farmer's boy to learn the processes of farming according to the best form known at the day without his being forced through a complete college preparation. There was a very reasonable disappointment abroad in the land when it was found that the arrangements at the colleges of agriculture did not provide for this. The agricultural colleges pushed their requirements up to the standards of the other colleges. The special students in agriculture, that is those who were deficient in preparation and over-supplied with age, were gradually but heartily eliminated. The result was that the farmer saw in the colleges little more than scientific laboratories and very few students. He was frankly disappointed.

The experience of the years has proved that he was reasonably and justly disappointed. But the growth of the years has proved that both the grangers and the professors of agriculture were right. The professors are coming to their own in that the demand for a genuine scientific education in agriculture is enormously increasing. Pupils come now in great masses who have the requisite preparation for their entrance into the university. In ten years the Berkeley college of agriculture grew from an attendance of 61 to 372; ten years from now it will have 1500. Provision, on the other hand, for that instruction in the arts of agriculture which the farmers had always expected is now being given in various forms: first of all through the short courses, which are every year adjusting themselves more accurately to a real need; second, through mechanisms like the farmers' institutes, the agricultural train, and the agricultural correspondence bureau; third, through schools like that now established at Davis.

It has required several years for this school to find out what its real place was. We have waited to be instructed by the de-



velopment of events. It is now clear that it is not exactly an agricultural high school. That is to say, it is not a school resting upon the top of the eighth grade to be attended by students of the age 13 or 14 to 16 or 17. The average age of the intrants is not measurably different from the age of intrants at Berkeley, i.e., 18 or 19. The fact is that the school will serve its main purpose in the education of students who are too old to go back into the high school either to prepare for college or to take high school education, including agriculture, with a view to completing their education with the high school. These are students who are for one reason or another out of the schedule. If they should seek an agricultural education by way of the high school and the university they would be 26 years old at graduation. They go to Davis, or schools like Davis, to obtain an education suited to their years. It may be that within 2 or 3 years at Davis they may bring themselves back into relation to the schedule, or, what is more likely, it may be that they will obtain the education which they desire, fitting them for life on the farm and positions in farm management.

The university farm at Davis, it should be well remembered, serves various purposes in addition to the maintenance of the farm school. It first of all provides a place for the laboratory and practice instruction for college students in agriculture. In the second place, it offers a place and environment for the short course instruction; and thirdly, it furnishes an opportunity for experimentation and research in various lines. The number of students in the farm school, which at first was small and grew but sluggishly, has leaped up in the autumn of 1912 by 50 per cent. The attendance is now about 150. There is every reason to believe that this number will now rapidly grow. The two dormitories now existing can accommodate 125. A third dormitory must be built at once, and a very considerable enlargement made in the dining room facilities. A fourth dormitory is also needed for housing college students.

It is the declared policy of the regents to develop the institution at Riverside on a large scale. The extent of land available to the institution at present has been found totally inadequate.

The purchase at once of 200 acres is recommended. In connection with the institution will be developed, in accordance with the regents' policy, a graduate school of tropical agriculture. In this school will be maintained a distinct group of scientific men engaged in the study of problems connected not only with citrus agriculture but with all propagation of trees and plants in the south countries under semi-arid conditions.

The indebtedness standing against the Kearney estate has now been removed, except for an amount of \$27,000 which will be removed and replaced by a surplus as soon as two years' crops of raisins remaining now unsold shall have been disposed of. A final policy regarding the use of the estate has not been determined by the regents. It must be expected, however, that some form of institution for the instruction of advanced and graduate students will be provided as soon as the accumulating income has furnished a reliable basis for advance, and in addition thereto, short-course instruction in viticulture, horticulture, and agronomy.

In 1910-11 farmers' institutes were held in 34 counties in the state; in 1911-12 in 38 counties. During 1910-11 there were held 87 one-day institutes, 14 two-day institutes, and two institutes of three days—a total of 103 institutes covering 267 sessions and with a total attendance of 34,038, making the average attendance per session 118. For the season 1911-12 the number of one-day institutes was 89, of two-day institutes 14, and of three-day institutes 4—a total of 107 institutes, covering 272 sessions, with a total attendance of 37,003, that is, an average attendance per session of 136.

During the year 1911-12 the agricultural train was in commission for 13 weeks; six runs of two weeks' duration being made and one of one week. The total attendance for the year was 102,624, as representing an increase of 24,000 or about 31 per cent over the preceding year. The train stopped at 238 points in the state. The diversified interests of the state have demanded the representation of an unusually large number of departments in connection with the work of the train, e.g., animal industry, veterinary science, dairy industry, crops, soils, fertilizers, plant

diseases, entomology, horticulture, viticulture, irrigation, poultry industry, apiary work, public health, home economics. The maintenance of the train, which we in first instance owed to the large-mindedness of the Southern Pacific Railway, has proved to be a severe drain upon the teaching force of the university. No less than some 18 men have been needed on the train as instructors. Most of them have been obliged to neglect for a two week period their classes at the university. The train is undoubtedly a success. It is undoubtedly a blessing to the state, but in its continuance we shall be obliged to rethink its purposes and uses and develop it into a new form. Just what that form will be we are at present unable to say. It is not improbable that during the first half of the year 1912-13 the train may be discontinued pending a reorganization which cannot be effected until the university force has been very signally augmented. It is evident that the force of men at the disposal of the college of agriculture in recent years has been utterly inadequate to its needs. The proper classifications of work have not been possible, and the individual members of the staff have been compelled to pass rapidly from instruction to research, to institute work, and train work in a way that constituted a peril to their physical health to say nothing of their scientific health.

For ten years past the two lower years of the medical department have been placed solidly on an academic basis. Since 1906 these departments—*anatomy, physiology, physiological chemistry, pathology, and bacteriology*—have been established at the university in Berkeley. It has become evident that this separation of the two parts of the medical school is not practically advantageous. Theoretically it had seemed possible that the medical sciences just mentioned had their place by virtue of their method and spirit at the university proper and could not thrive in their development if removed from the university. Experience seems to have shown that the medical school must be developed as a whole. It would undoubtedly be the best solution if the clinical, that is the two latter, years of the medical course, could accompany the first two years to the university. The teaching force of the first two years will unquestionably miss the scientific at-



mosphere of the university if removed. It is necessary, however, to take many things into account and among these things is the consideration that at Berkeley there is no university hospital or buildings for laboratories and teaching rooms for the medical school. The provision and maintenance of a teaching hospital must evidently depend upon private beneficence. The state cannot, at least at the present, think of providing it. A teaching hospital such as is absolutely necessary if a first-rate medical school is to be established, equipped up to the full modern standard, must be provided with free beds or semi-free beds to such an extent that it will be a real teaching hospital. For the present, at least, the clinical material needed for such a hospital will be found in greater abundance on the San Francisco side of the bay. But what is of more account, it is believed that private financial support for such a hospital is to be found rather in San Francisco than on the east side of the bay. This consideration, coupled with the fact that the clinical departments are already established in San Francisco and that the buildings of the affiliated colleges provide at least the nucleus of what is needed in the way of medical buildings, has finally determined the policy of the regents.

At the regular December meeting of the regents in 1911 their committee on medical instruction recommended that the various departments of the medical school be brought together in San Francisco as soon as possible; that the clinical years be put forth-with upon an academic basis; and that a proper teaching hospital and proper laboratories for instruction and research be provided. The regents furthermore declared it their policy to establish and maintain a medical school of the highest standard. At the regular April meeting in 1912 the regents, upon recommendation of the medical faculty, adopted the following plan of re-organization.

Clinical instruction in the medical school is to be carried on in three main departments:

First, Gynecology and Obstetrics; it was decided to put this department upon an academic basis at once and to provide a salary of \$4000 for a professor and one of \$2000 for an assistant.

Second, Medicine; this department is to include pediatrics, neurology, and dermatology. It cannot as yet be placed upon a full academic basis, but the sum of \$2300 has been devoted to the payment of assistants for the coming year. As head of this department and at the same time dean of the school was appointed Dr. Herbert C. Moffitt. Dr. W. W. Kerr is to be clinical professor of medicine, carrying on his present work at the San Francisco hospital. The department of pediatrics will be under the direction of Dr. W. B. Lewitt, as clinical professor of pediatrics, and the department of dermatology under the charge of Dr. Howard Morrow, as clinical professor of dermatology.

Third, Surgery; this department is to include orthopedics, urology, ophthalmology, rhinology, otology, and laryngology. Though sufficient funds were not available for this year to put the department upon a full academic basis, the sum of \$1800 was devoted to payment of three assistants. Dr. Wallace I. Terry was appointed professor of surgery.

In addition to these three main departments the work of the hospital pathologist was re-organized and an assistant professor of pathology was secured at a salary of \$2000; and \$1200 was furthermore provided for the payment of salaries in connection with the field of radiography. The budget of expense for medical instruction for 1912-13 takes the following form:

For maintenance of the first two years:

	Salaries	Budget	Total	
Anatomy .....	\$10,900	\$2,740	\$13,640	
Physiology .....	8,120	3,000	11,120	
Pathology .....	10,700	3,675	14,375	\$39,135

For maintenance of the clinical years:

Professor of obstetrics and gynecology .....	\$ 4,000	
Assistant in obstetrics and gynecology .....	2,000	
Assistants in medicine .....	2,300	
Assistants in surgery .....	1,800	
Additional salary to hospital pathologist .....	700	
X-Ray department .....	1,200	
General budget .....	7,630	
Special budget for university hospital .....	12,000	
Assistant superintendent and hospital stenographer .....	2,400	34,030
Total .....		\$73,165



In accordance with the policy thus adopted and initiated by the regents a movement is on foot to provide a new university hospital. The present plans contemplate four units of 40 to 50 beds each. These four units are respectively devoted to surgery, medicine, diseases of women, diseases of children. Money has already been provided by private generosity for the equipment of two of these units. In order to carry on the work in the present buildings the regents have appropriated \$14,000 for alterations in the hospital for the accommodation of clinics and equipment of clinical and pathological laboratories. A children's ward has been added to the hospital. The changes in the hospital and dispensary during the summer have made possible a much better system of instruction for students. They have been followed moreover by a gratifying increase in patients reporting for treatment. The total attendance in the out-patient department during July was 643, in August 1155, in September 1505.

The department of chemistry has undergone thorough re-organization. The relations of this department are fundamental to many other departments of the university. Investigation showed that the department has been in recent years, in consideration of its importance to the whole university, undermanned and underequipped. In the re-organization Dr. Gilbert N. Lewis, professor in the Massachusetts Institute of Technology, was appointed professor of physical chemistry with the chairmanship of the department. Professor O'Neill, professor of inorganic chemistry, is made director of the laboratory and will have under his care the business interests of the laboratory as heretofore. Two assistant professors, Dr. W. C. Bray and Dr. R. C. Tolman, two instructors, and two assistants were further added to the roll of the department. A new temporary building of modest dimensions but entirely suited and equipped for this work has been erected at the southeast corner of the laboratory and is devoted entirely to research work.

The department of jurisprudence is about to become the school of jurisprudence. It has during the past year made in every way notable gains as the result of its occupation of the new Boalt Hall. Students and professors are brought together there into

a community. Professors in their study rooms are constantly in touch with the students who work in the reading room—the reading room will be found occupied almost to its full capacity all day long. We are at last well on the way toward the obtainment in Berkeley of a strictly first-rate law school. The most notable need of the school at present is the provision of additional funds for the development of the library. The library is at present dependent for its growth upon the \$12,000 given by Mrs. Sather as a law library fund.

With the beginning of the year 1912–13 it is proposed to give the work in university extension an entirely new organization, and to conduct it thereafter on a greatly enlarged plan. The work heretofore has been limited to a certain few more or less self-sustaining centres and to the maintenance of courses of lectures. The new plan will undertake to reach a very much larger proportion of our communities, and to reach them by a variety of devices. It will not be expected that the work taken as a whole should be entirely self-sustaining. As director of university extension we have appointed Professor Ira W. Horner, long connected with the similar department of university extension at the University of Chicago. It is proposed that the work in university extension be conducted in five departments: (a) department of class instruction; (b) department of correspondence instruction; (c) department of public lectures, including: 1, lecture studies; 2, the university extension lyceum; (d) department of debate and public discussion; (e) department of information and social welfare.

According to the plan, therefore, the university is to provide not only extension lectures but class instruction, and, what is more, instruction by correspondence according to the system which has proved successful in the University of Chicago and the University of Wisconsin. Through the department of debate and public discussion assistance will be afforded to high schools and to rural and city debating clubs in the selection of subjects and the collection of material. The work of this department has been carried on with success both in the University of Wisconsin and the University of Kansas. Kansas University sent out last

year to debating clubs in the state more than 1400 collections of materials for the use of debating clubs.

The department of information and social welfare is to serve as a sort of clearing-house through which enquiries of the most diverse character may receive consideration. It will issue bulletins on matters pertaining to public welfare, collect and exhibit maps, charts, models, pictures, etc., of social interest and lend them to communities desiring their use, without cost except for transportation. It may also organize within it a municipal reference bureau for the service of cities of the state and for the benefit of all persons who may be sufficiently interested in municipal life to call upon it for information or assistance. It would collect and keep on file for the use of those who might wish to consult them, city charters, reports of recent city legislation, books, magazine articles, newspaper clippings, and other sources of information in regard to municipal government and municipal progress, and answer such enquiries as might be made concerning municipal organization and administration, public utilities, and other matters of municipal interest. This department may also include a bureau of civic and social centre development to stimulate the modern tendency toward a wider and more effective use not only of school-houses but of all buildings belonging to the public.

To facilitate the organization and administration of university extension work the state will be divided into three districts, with a secretary in charge of each. The secretaries will act as field representatives of the university and organizers of university extension work. The headquarters of the southern district will be in Los Angeles. In a word, the University of California proposes to devote the same attention to university extension as is now given by some of the other large state universities. To carry the plan into successful operation it is estimated that an appropriation of \$50,000 will be required for the biennium 1913-15. This is a small sum in comparison with the appropriation of Wisconsin for university extension, which is, for the present single year, \$125,000—that is, five times as much as we shall ask.

Considerable readjustment in the uses and assignments of buildings characterized the past year. The new library building, memorial to Mr. Charles Franklin Doe of San Francisco, was occupied in the autumn of 1911, and dedicated on Charter Day, 1912. Its opening set free the old Bacon library which now, under the name of Bacon Hall, is devoted to the uses of geology, mineralogy, geography, and palaeontology. For the first time in recent years these departments have a reasonable quota of space. The transfer of geology and palaeontology from South Hall made it possible to give that building over entirely to physics, bringing in the older class laboratories heretofore at East Hall. This, in turn, gave much needed enlargement of room for the department of zoology. In the summer of 1912 the agricultural department occupied the new Agricultural Hall. This building was erected by the regents from moneys of the permanent building fund. Since the building has been in erection the growth of the department has very materially changed all ideas regarding the space needed. The new building serves only to provide for the overflow from the old building. Our architectural plan contemplates a connex of five building units. It is evident that another one of these must be immediately provided.

California Hall, which was occupied in 1905, is now overcrowded. The attic floor is fully absorbed by the department of statistics and finance in the college of commerce and, on the other side, by the department of drawing. The second floor is, as from the beginning, used for the business offices. The first floor is used for lecture rooms, and the basement for various storage. The comptroller's office has gradually expanded, taking in for the use of the purchasing agent the room formerly assigned to the deans. The comptroller presents an urgent plea for the entire west side of the second floor of the building, taking thereby the space now occupied by the recorder, whose offices would in that case have to be assigned to the southwest side of the first floor. This would take away two recitation rooms and two offices from a most intensive use and need. Until a very largely increased provision for lecture rooms is made it seems impossible to assent to the comptroller's very reasonable demands. (The



tremendous increase in the volume of business passing through his office evidently makes his present quarters very congested.)

It has generally been supposed that the new University Library was the one building which was large enough for present university needs. The experience of the past year shows that not even the reading-room is large enough; it is frequently overcrowded. There were many who thought at the time when it was built that this reading-room provision for 400 seats was a ludicrous anachronism. It was supposed to be out of balance with the space accorded to book storage. The reverse proves to be the case. The room for book storage is sufficient for the present, but even that, with the rapid growth of the library, will be fully taxed within two years. By that time it will be necessary to begin the addition to the book-stack which our plans originally postponed for a period of about ten years.

The chemical laboratory has been enlarged by a temporary addition for research and by a new fireproof auditorium having a seating capacity of somewhat over 500. The rapid growth of the department of architecture has necessitated an addition in temporary construction costing about \$10,000.

The university community needs perhaps above anything else a great auditorium—a place where the university community can be assembled—a place where the university meetings and university festivals can be held. The Greek Theatre serves well enough for the commencement exercises, but at other times in the year it has not proved safe to arrange for such important gatherings in a place exposed to the weather. The central feature of such an auditorium should be a great organ. We cannot have a church but at least we ought to have an auditorium and an organ. Harmon Gymnasium has long since, with its seating capacity of less than 2,000, proved inadequate for our need. It is furthermore a building of very temporary construction.

North Hall, a faithful and much beloved structure, has after forty years, outlived its usefulness and entered upon a period of ill-concealed senility. It was built forty years ago at the very beginning of things in Berkeley as an entirely temporary construction. The time has now come when it must be removed.



The building will not much longer be safe. It is the most used building of any on the grounds. A count of attendance during one forenoon hour shows that 1057 students were in attendance upon classes in its lecture rooms. It will unfortunately be necessary to remove North Hall in order to erect the building which takes its place. This means that a large temporary building, capable of housing not less than 1500 at a time, must be provided. One can clearly foresee that with the growth of the university and the unlikelihood of large enough provision of funds in the near future this temporary building will when the time comes be fully needed in addition to the new North Hall. The latter must, however, be provided. If it is not so provided the decay of the present North Hall will leave the great mass of the Berkeley students out under the sky.

The men of the university have for a long time been very desirous that there should be provided a proper running track. It has proved difficult to find a place on the university grounds where a track of sufficient length could be laid out. The place most desired was the strip on College avenue running from the Infirmary to the corner of Bancroft way. The students were encouraged to believe that it was possible to obtain this strip for the purposes of a running track. The associated students of the university out of their funds purchased, at an expense of \$31,813.90 all the property on Sylvan way and College avenue not already owned by the university and deeded it to the regents. The following are the properties so deeded:

Broderick property (Lot 2) 2644 Sylvan Way.....	\$7,516.40
Pitcher property (Lot 3) 2246 College Ave. ....	6,722.50
Cowperthwaite property, 2248 College Ave. ....	7,500.00
Martin property, Sylvan Way and College Ave. ....	9,950.00
Miscellaneous expenses .....	125.00
	<hr/>
	\$31,813.90

The lots now occupied by Hearst Hall and the bathhouse adjoining were given to the university by Mrs. Hearst as a site for the women's gymnasium. It is doubtful if under any conditions this land could ever be utilized for any other purpose,

but under no circumstances could any such transfer of use be even considered unless a location quite as good or better could be found for the women's gymnasium, basketball court, and tennis courts. Such new location has not been found. The regents have, however, accepted from the students a deed of the property above referred to and have accepted it with the understanding that a running track was to be provided for. The problem of finding such a location is thereby constituted a first lien on our attention. The Hillegass tract is proving itself all too small for the different interests which claim its use. There is not room enough in it for the athletics and sports alone. We need at least two fields for baseball or football. Not less than fifteen tennis courts and a running track are needed—these for the men alone. The women can well use all the free space on the College avenue side between Bancroft way and Sylvan way, including the space now occupied by the temporary building for pathology.

It is not apparent what space can be in the future used as a proper drill ground. The area west of California Hall is appropriated in the architectural plan for various buildings, but even if that space be left open it is proving itself inadequate. The cadet regiment has now reached 3100 in number. For a review it is difficult to bring so large a number within so narrow a space. For the ordinary drill one of the three battalions must be taken to the athletic field on the Hillegass tract. Major Nance, with the approval of the military committee of the faculty, is recommending to the regents that the open space at the northwest of the university grounds bounded by Oxford street and Hearst avenue be appropriated to the use of the military department. It is rolling ground, but the committee believes that in spite of this and the difficulty and expense that would be involved in any, even partial, grading of it, it is the only opportunity for space enough to meet the needs of the military department. The granting of this area for military purposes would necessitate giving up the proposed opening to the grounds at University avenue.

Space does not permit consideration of the work and progress of the several departments in detail, but items of chief interest and first needs are set out briefly in the "Summary of Departmental Reports" appended hereto.

Respectfully submitted,

BENJAMIN IDE WHEELER,  
President of the University.

## SUMMARY OF DEPARTMENTAL REPORTS<sup>1</sup>

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**Anatomy.**—The enrollment in this department stood at 30 at the close of the biennium, but in August, 1912, advanced to 50, necessitating an addition to the Anatomy Building and an increase in the teaching staff. The department has just distributed the fourth volume of its reprints, which represent the result of nine pieces of research. Two other articles are ready for publication. The students last year initiated a very commendable programme on their own account and aside from the prescribed courses of the department in the organization of a seminar meeting once a week to study the history of medicine. Two or three papers were read at each gathering, followed by discussion. The books on the history of medicine in the department library were used to advantage in this connection. Members of the faculty frequently attended the seminar, and the average number of students present at each meeting was 18 to 20.

**Anthropology.**—The anthropological museum, temporarily sheltered in the Western Building of the Affiliated Colleges, was opened to public exhibition on October 4, 1911, with a reception provided by Mrs. Phoebe A. Hearst, to whose generosity and interest the University is chiefly indebted for its splendid collections in anthropology. Altogether about one-half of the treasures in the museum are now available to the inspection of visitors. Since October the doors have been open to the public each day in the week except Mondays for six hours. The Sunday and holiday exhibitions have naturally attracted the largest companies of visitors. The total attendance during the nine months from October, 1911, to July, 1912, was 28,343. The curator has set aside a special room for the display of successive group collections, each a distinct unit, for periods of about two months. The following subjects have thus been presented in this "revolving exhibit": Weapons of All Nations; Disposal of the Dead; Aboriginal Inventors—the Eskimo; The Bedrock of California History; and In the Footsteps of the Cliff Dwellers. The

<sup>1</sup> The department of agriculture is represented in the main report. The departments of jurisprudence and chemistry are considered both there and in this summary. The departments of mathematics, mechanics, music, philosophy, physiology, and Sanskrit submitted no report.



various exhibits have been supplemented in lectures by members of the staff. These have become a regular feature on all Sundays, holidays, and special occasions. Altogether 107 such informal public lectures, illustrated either with stereopticon views or specimens, have been given in the museum in the nine months since the opening and it is estimated that at least half of the total number of visitors have been auditors. In addition special lectures have been provided for visiting classes from the public schools under an arrangement with the Superintendent of Schools in the city and county of San Francisco, whereby 35 classes, mostly of the eighth grade and numbering altogether 1932 pupils, visited the museum on Thursday and Friday afternoons for instruction in anthropological subjects.

The research activities of the members of the staff in connection with the general ethnological and archaeological survey of the state continue. Definite studies have been made in the last two years of the phonetic systems of the native languages of California, of the ethnogeography of the state, and of the earliest known human life and culture as revealed in the shellmound deposits. The survey of the mounds of San Francisco Bay and of the ocean shore immediately adjacent has been completed, and a beginning made toward an extension of this exploration to Southern California; and the ultimate plan of the department is to explore the entire coast of the state as a part of this study. In addition, of course, anthropological investigations of a more special and intensive or local character have been undertaken. There are now, indeed, few parts of the world concerning whose aboriginal inhabitants and prehistory there is as much information extant and on record as about California. To date 11 volumes have been issued in the University of California publications in American Archaeology and Ethnology. The curator reports that "the department now possesses more than 200 manuscript books of notes, nearly 6000 negatives, over 1700 phonograph records, more than 10,000 phonetic tracings, and anthropometric sets of measurements of about 500 individuals. This is a concrete, permanent basis for future study and research which is entirely independent of the lives and careers of individual workers, and the like of which is possessed by but few institutions in the world, and is paralleled in only one or two American universities."

**Architecture.**—The entering class in 1911 numbered 26 as against 13 in 1910. This, with the increase in other classes, necessitated an addition to the architecture building, which by the time this report is issued will be virtually complete. The professor of architecture thinks that the responsibility of his department to send out architects of training, taste, sound sense, and discernment might better be met through the organization of instruction in a separate college with entire control over the courses of study of its members as against the present plan of a major



in architecture by students enrolled in the colleges of letters, natural sciences, or social sciences. This is, however, a matter on which the faculties have not yet come to determination with a view of recommendation to the regents.

**Astronomy.**<sup>2</sup>—The Students' Observatory, conceived by the foresight of Professor Frank Soulé and founded on his recommendation by a special grant of the legislature, has now reached its twenty-fifth year of activity and has developed into the largest teaching department of astronomy in America. During the academic year 1911-12 the number of applicants for enrollment in general astronomy was 650, or 100 per cent more than during the last year of the preceding biennium. At the same time the percentage of men increased from 30 to 75 per cent. Lack of room made necessary the repetition of the lectures three times over. The course is chosen largely by engineering students. The number of women in the college of social sciences registering for this work shows a marked decrease; indicating that the course is not being elected merely to satisfy the science requirement, a motive which is discountenanced by the department. At the close of the biennium the university had on its rolls 14 candidates for the doctor's degree with astronomy as their major subject. In accordance with the admirable co-operative plan of the Lick and Berkeley departments for the training of astronomers these candidates divide their time between the two institutions and pursue their special work under the immediate direction either of Dr. Campbell or Professor Leuschner. The research work on the perturbations of the Watson Asteroids have been continued through the generosity of the National Academy of Sciences. The orbit methods of Professor Leuschner found extensive and noteworthy recognition in the recently published third edition of Klinkerfues *Theoretische Astronomie*. In 1912 asteroid 1911 MT was rediscovered on Greenwich plates by the aid of computation and forecast by members of the Berkeley staff using Leuschner's Short Method. During the biennium the seismological service was transferred to the department of geology and the meteorological service to the department of geography, in each case by common consent. The department reports urgent need of more observing rooms for housing its instruments; a clock vault; laboratory space, particularly for instruction in elementary astrophysics; a new computing room; and more commodious office quarters for the staff, who are of course frequently on duty in the evenings as well as the daytime. Professor R. T. Crawford was absent in Europe on leave in 1911-12, devoting his time for the most part to studies in higher geodesy at the University of Berlin under Professor Helmert in pursuance of a plan for the further development of instruction in this subject for the benefit of students in civil engineering.

<sup>2</sup> For Director Campbell's report on the Lick Observatory see p. 99.

**Botany.**<sup>3</sup>—The work of instruction both in the undergraduate and graduate branches continues to suffer for inadequacy of space and facilities. The herbarium received during the biennium an accession by gift of 25,985 items.<sup>4</sup> The equipment has been extensively expanded also through exchange with other institutions. The department within the last six months sent out something over 13,000 sheets of duplicate herbarium specimens, nearly all of which bring back their equivalent of desirable specimens. A special assemblage of rare and critical material organized, labeled, and serially numbered for purposes of reference by specialists, and distributed to directors of herbaria, museums, and botanical gardens—28 institutions in all—in England, on the Continent, and throughout America, elicited cordial commendation. The permanently mounted sheets in the herbarium now number 163,475, of which 21,663 have been added in the two-year period covered by this report. There are also on hand about 150,000 sheets awaiting their turn for mounting and filing. The herbarium may now be fairly designated the leading botanical center of the West. Friendly relations have been established and continued with other institutions, chiefly through a series of loans from our herbarium to specialists in America or abroad, and return loans from their institutions to us. The department is now constantly consulted for botanical information, the nature of which ranges from the naming of large collections and the supplying of critical notes for specialists to the identification of poisonous or otherwise objectionable weeds for the benefit of farmers or stock men.

**Chemistry.**—The pressure for additional room in this department reached a pitch in 1911–12 that made immediate relief positively imperative. The laboratory built in 1890 to accommodate 500 students was forced to shelter more than 2000. The department at the close of the biennium is, however, happily equipped with two new structures: the chemistry lecture auditorium, a steel and concrete building, fire and earthquake proof, with complete and ingeniously arranged lecture table, a commodious preparation room and accommodation for some 500 students; and the new temporary laboratory housing a machine shop, glass blower's room, library, two large laboratories and a number of small laboratories, and offices for research work, affording therefore, temporary in character as it is, extensive facility for the study of advanced inorganic and physical chemistry. These new buildings furnish ample quarters for the senior and graduate students, but provision for the main body of undergraduates is still totally inadequate and a beginning should be made, when possible, in the construction of a new permanent laboratory, or at any rate such part of it as the funds of the university will permit. New appointments to the staff are referred to on page 000 of the main report. The call for the teaching of chemistry in the univer-

<sup>3</sup> See list of gifts to the department of botany on pp. 260–270.

<sup>4</sup> See list of gifts to the herbarium on pp. 260–266.

sity and the significance thereof to California is succinctly set out by Professor O'Neill in his report: "Chemistry is destined to play an important part in the development of this state. The mining period, succeeded by the agricultural developments, will in turn be followed by a manufacturing era, the magnitude of which no one can predict. The chemist will be the most important person in this development. California has everything imaginable in the way of raw materials, organic and inorganic, common and rare, heavy and precious, and it only awaits some one to work up this raw material. The other essentials of chemical manufacturing, viz., power and fuel, are here in enormous quantities; water power, electric energy, and oil are here waiting to be used. It needs some one to point out the possibilities and to guide the experiments, and the enlarged chemistry department should take advantage of this condition and demonstrate its usefulness and efficiency. The appointment of Professor Lewis is the first step in this direction. Every member of the department will co-operate to make the college efficient and a source of strength to the university."

**Civil Engineering.**—Co-operation with other departments has laid a considerable additional burden on the sanitary engineering division, which receives a large influx of students from the departments of domestic science, hygiene, medicine, and architecture. The civil engineering department has also during the past two years assumed the responsibility for new courses in structural design for architectural students, which are over and above the courses offered in these subjects to civil engineers. It is probable that in the near future most students in agriculture will take the courses in freshman surveying and avail themselves of summer surveying school field experience. The department of mechanics has hydraulic laboratories, but the professor of civil engineering thinks that laboratories which would be concerned with that branch of hydraulics that looks to the measure of water, its flow through weirs, through channels, through filtration sands, in open channels and through rivers, in all of which the irrigationist and sanitary engineer are primarily interested, should be founded in his department. The department of civil engineering is closely linked with that of irrigation and the two meet frequently in joint session with mutual benefit. Freshmen, juniors, and seniors are fairly well provided for in respect of draughting room facilities, but there is no space available to the sophomore students. The great immediate need in the testing laboratory is a high power testing machine which, the dean of the college says, would in time in the receipt of outside work pay for itself and the building in which it would be housed. F. S. Foote has joined the teaching staff as associate professor of railway engineering. The policy of the department is to co-operate with the railroads and the state railway commission in experimental railroad work in California, especially in the study of train resistance, bridge vibration, and similar problems.



**Drawing.**—The department provides instruction for approximately 500 students, mainly from the colleges of engineering and the department of architecture. There is, however, an increasing demand for teachers of drawing in the secondary schools, and three new courses have been inaugurated with a view to this end. The department suffers through the assignment of its various branches to three distinct buildings—an undesirable but apparently unavoidable condition amid conflicting claims in the present stringent pressure in all departments of the university for more room.

**Economics.**—The professor of economics reports: “The most notable progress has been in the systematic inauguration of work in the field of railway economics and administration and in the expansion of the work under Professor Peixotto’s charge, which may be designated the field of constructive and preventive philanthropy. The department has also experienced a gratifying growth in the number of graduate students and an equal improvement in the character of the graduate work and teaching.”

**Education.**—In succession to Dr. David P. Barrows, who was during the biennium appointed to the headship of the department of political science, Professor Ira W. Howerth of the University of Chicago has joined the staff as professor of education and director of university extension. The conditions and needs outlined in the biennial report of the president for 1908–10, pages 23–25, still prevail and Professor Lange continues to urge the desirability of a state high school.

**English.**—Professor Cornelius B. Bradley, after industrious and efficient service of more than twenty-five years, retired with the title professor emeritus, on July 1, 1911, in the enjoyment of the Carnegie Foundation allowance. Associate Professor Wells was on leave of absence in 1910–11 and Instructor von Neumayer in 1911–12. Commendable emphasis has been placed in all the lower division courses on the speaking and writing of English. The classes in linguistics hold their own proportionally. The courses in the history of literature and in the study of the masters and masterpieces have been decreased about one-half in number and so reorganized as to accommodate on the one hand the ordinary run of students in a few large courses, and, on the other, the specializing seniors and graduates in seminars limited in membership to twenty-four. The larger classes range from seventy to five hundred, and Professor Gayley’s course in “great books” has been given in the Greek Theatre. The following statement is quoted from the report of the professor of English to the President: “The system of final examinations, initiated by the English department some eight years ago, has resulted most advantageously in diminishing the students’ avidity for mere units and credits in course, by throwing him upon his own responsibility for the acquirement

of the information and discipline requisite to pass the decidedly severe tests imposed in each of the five educational divisions covered by the department of English: the History of the Language; the History of the Literature; the Theory of Poetry and Prose; the study of individual Authors, Masterpieces, and Movements; and Composition, oral and written. There is hopeful indication that the system will be increasingly adopted by other departments of the University. This system has been extended, also, to the courses in the English graduate school, during the biennium. No applicant for a higher degree is recommended, until, in addition to fulfilling the usual requirements of courses, examination on Major and Minor, and thesis, he has passed the Final Examinations covering the five divisions above mentioned."

**Geography.**—Two changes of leading interest have occurred since the last report: the reorganization of the work in meteorology under Instructor Reed, with courses that appeal particularly to engineering students; and the transfer of the department to Bacon Hall, where there is opportunity for map study and laboratory exercises.

**Geology.**—This department has been moved from South Hall to Bacon Hall. "The change," Professor Lawson reports, "has afforded great relief from the crowded conditions which prevailed for many years past in South Hall. The new quarters are sufficiently commodious for the present needs of the department, and the opportunity which they afford for the convenient arrangement of our work has increased the efficiency of the department. The housing of the allied departments of Palaeontology and Physical Geography under the same roof with Geology and Mineralogy brings together a natural group of studies the close association of which is a convenience and a benefit to professors and students alike." It is hoped that some day there may be a building specially designed for these allied branches. Seismology is now a division of the department of geology. The Berkeley station has become one of the recognized points of importance in the international series of institutions of this kind, particularly as its work is supplemented by the new installation at the Lick Observatory. In the summer of 1911 Professor Lawson went to Canada in acceptance of an official invitation from the director of the geological survey, and conducted investigations in the Archaean Geology of the Lake Superior region which led to interesting and important discoveries. He has also been asked to act as leader in important discussions at the forthcoming geological congress to be held in Canada in 1913.

**German.**—The German department rejoices in the opportunity opened to it by the gift of \$1000 from Mrs. E. A. Denicke to enrich its library. There is a growing demand for graduate work of seminar grade and the number of candidates for the doctor's degree is yearly larger.



**Greek.**—The great falling off of numbers in the higher classes in Greek during the years from 1900 to 1910 is apparently at an end; there has been, indeed, since the latter year a slight gain. Assistant Professor Linforth has been honoured with a Kahn travelling fellowship and will spend the year 1912-13 abroad. The professor of Greek reports as follows concerning the teaching of beginners: "For two years past Professor J. T. Allen of the Greek department has been engaged in an interesting experiment in the teaching of elementary Greek. His method, which is practically new in this country, consists in the effort to teach Greek as a spoken language, with the constant use of the tongue and the ear as well as the eye. The living phrase is emphasized from the first, by oral as well as written exercises, though the acquiring of reading power is always kept in view as the chief object. After the first two weeks, manufactured exercises for translation are dropped entirely, and the student is set at once passages of real Greek from the best classical authors. The method is kindred to the famous Frankfort Method, so favorably known in Germany and in England, and has already been attended with considerable success. The number of students in the class increased from thirty during the first year to fifty in the second, and the results obtained were equally gratifying. Professor Allen feels that the most hopeful way to check the decline of interest in Greek is to vivify the teaching with more rational methods, and to enrich the content of instruction by bringing the student into immediate contact with such writers as Plato, Herodotus, Aristophanes, and Menander, rather than to force him to spend a whole year on a work of such moderate interest as Xenophon's *Anabasis*."

**History.**—An event of first importance in the biennium was the foundation by the Order of the Native Sons of the Golden West of a travelling fellowship in Pacific Coast History in 1910 and of two resident fellowships in the same subject in 1911. The Academy of Pacific Coast History, having in care the Bancroft library, heretofore supported as to running expenses in chief part by private donation, has been taken over by the regents and given a place in the Doe university library building. The generosity of Mrs. Hearst has made available further transcripts of valuable Spanish archives. The publication of the first two volumes of the Academy of Pacific Coast History attracted wide interest and general commendation for the editor, Professor F. J. Teggart. The accession of Professor Herbert E. Bolton to the history staff has given emphatic impetus to the work of the department in Spanish-American history. Professor McCormac's monograph on Colonial Opposition to Imperial Authority during the French and Indian War, has been generally recognized as a real contribution to American colonial history. An attempt to deal with the problem of instruction in history for under-classmen and specially for those students who are not going to pursue history further

takes the form of a course in general history, organized with lectures by the head of the department aided by a staff of teaching fellows in charge of section meetings. The enrollment of graduate students in 1911-12 ranged between forty and fifty. The urgent need of the department for books especially in medieval and modern European history will be partly met by the Sather endowment, which is deeply appreciated; but there still continues pressing requirement for the great standard works and collections which cannot be obtained from the annual allotment, even with the addition of the Sather fund, without neglecting the immediate purchase of current historical literature.

**Hygiene.**<sup>5</sup>—The work is two-fold, covering the teaching of hygiene in the university and the activities of the state hygienic laboratory. The growing confidence on the part of the public in hygiene is attributed by the head of the department largely to the marvelous results of the health supervision in the Panama Zone which has led to a widespread belief that through the development of this science and the dissemination of its results the human race is to achieve a security and comfort in life of which it has before only dreamed. The department conceives of "hygiene as the science which concerns itself with the preservation of health and the prevention of disease, trenching at no point upon the art of medicine, which is concerned with the treatment of disease. It shares the foresight of modern economics and criminology, which endeavor to prevent poverty by removing the causes rather than by resorting to charity, and to lessen crime by doing away with crime-breeding conditions rather than by increasing punishments for crime committed." In the teaching of hygiene the university recognizes and attempts to provide for every phase of public health work. During the past year the number of students enrolled in the prescribed course in general hygiene was 1151. The enrollment in elective courses was so large as to necessitate elimination. In laboratory classes there was neither space nor equipment for the teaching of large groups of students. Over five hundred students applied for admission to the classes in First Aid, but only 122, all members of the upper division, were permitted to register. Dr. John N. Force has followed out to practical ends his theoretic work in epidemiology and sanitary survey.

The hygienic laboratory aids physicians and health officers of California in the detection and control of communicable diseases. Dr. W. A. Sawyer's article, "A Typhoid Carrier on Shipboard," published in the *Journal of the American Medical Association* is receiving international attention. The activities of the laboratory against rabies have been insistent. The rapid spread of this disease in California has given the state full cause for alarm. The death of fourteen human beings has been

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<sup>5</sup> See the report on the student infirmary, p. 78.

an impressive lesson and the public is coöperating with the laboratory in earnest effort to eradicate the disease. Over 300 dogs' heads have been sent to the laboratory for examination. The largest number of persons bitten by one dog was six; and the total number of persons bitten was 248. A local Pasteur institute, inspected and approved by the United State public health and marine hospital service, has been founded in Berkeley and Pasteur treatments had been administered to 127 cases by July 1, 1912. The laboratory maintains an emergency field equipment which may in time of crises be transferred to any part of the state.

**Irrigation.**—The total enrollment in the courses offered in irrigation has increased ten per cent, from 273 students in the college year 1909–10 to 302 in the year 1911–12. The branches of instruction cover irrigation and drainage engineering, irrigation practice and the agricultural use of water, and irrigation institutions and administration. The magnitude of the large irrigation projects undertaken during the past ten or fifteen years calls for intelligent co-ordination of the principles of structural engineering with those of hydraulic engineering and of agriculture; with the result that the department considers itself to be closely allied with civil engineering and agriculture in the university, whose department meetings the irrigation staff attend. The dearth of good text books for education in his field led Professor Etcheverry to prepare during the past two years a mimeograph manuscript on irrigation, equivalent to about 250 pages of printed text, with some 40 accompanying drawings of irrigation structures, which will in the near future be printed in book form. Professor Chandler has also in preparation a book on water rights and irrigation institutions. Civil engineering graduates trained in irrigation secured immediate positions in 1911–12 in California, with the reclamation service in Utah and Nevada, and in British Columbia, and offers had to be declined from Texas, Montana, New Mexico, Honolulu and Australia owing to dearth of men.

**Jurisprudence.**<sup>c</sup>—The law classes under charge of the faculty of jurisprudence first occupied the Boalt Memorial Hall of Law in January, 1911. The building was dedicated on April 28, 1911, with addresses by Professor William Carey Jones, Regent Charles Stetson Wheeler, and President Wheeler. The university is indebted for this fine home of the law department to Mrs. Elizabeth J. Boalt, after whose honored husband, the late Judge Boalt, the building takes its name, and to 75 members of the bench and bar of California. Significant and gratifying advance in the *morale* of the entire household of law is the result of the establishment of the department in Boalt Hall. The \$20,000 endowment of Mrs. Jane K. Sather has become available as to income for the pur-

<sup>c</sup> See further references to department (now school) of jurisprudence, pp. 22, 161.



chase of legal works. The number of volumes in the law library is approximately 10,000.

At the time of the writing of this report the *department* of jurisprudence has, by action of the regents of November 12, 1912, in adoption of the following report of a special committee consisting of the attorney members of the board, become the *school* of jurisprudence: "We have the honor of recommending that a School of Jurisprudence be . . . constituted, as a matter of proper university policy, as an establishment of the existing situation, and as a recognition of the excellent provision for professional training in law which has now been created by the generosity of Mrs. Boalt, of the lawyers of California, and of Mrs. Jane K. Sather, the endeavors of the faculty, and the general development of the university."

The number of students enrolled in the classes in jurisprudence is 523. Of these 400 are pursuing the general and preliminary legal subjects, and 123 are registered in the professional courses leading to the J.D. degree, there being 69 in the first year, 37 in the second, and 17 in the third. Of these students 60 are holders of the bachelor's degree, 17 from universities other than the University of California, including Wisconsin, Pennsylvania, Stanford, Brown, Columbia, Yale, and Harvard.

The plans of the department initiated during the biennium for the establishment of a periodical of law have culminated at the time of the writing of this report in the California Law Review, the first number of which was issued in November, 1912. This journal will now be published bi-monthly by the faculty and students of the school of jurisprudence under the chief editorship of Professor Orrin Kip McMurray. Each number will contain several articles of interest to the legal profession, comment on recent cases, and discussion of contemporary legislation. It is intended to cover particularly the field of law peculiar to California and the Pacific states with the aim of bringing the school into touch with the life of the law and of contributing to the appreciation and solution of legal problems.

**Latin.**—The professor of Latin reports: "The courses in the department are largely taken by the female students, most of whom after graduation engage in teaching. The life of the teacher, however, is short, and there is already some evidence that the sons of these former teachers and Latin students come up to the university with an interest in the humanities due to the training received in an earlier generation by their mothers. . . . The special work in classical archaeology has increased in scope, in efficiency and in attractiveness. It may be that the lessons of ancient life to our hurrying modern world will be given through archaeology, rather than through the minute analysis of literary monuments."

**Military Science and Tactics.**—In the fall of 1910 two additional companies were formed so that the regiment now consists of three battalions of five companies each. The total enrollment of students in the department was for the year 1910–11 1357 and for the year 1911–12 1353. The maximum strength of the regiment was 1223 and 1231 for the respective years. The need of an adequate drill ground is urgent.<sup>7</sup> Further than this the most pressing requirements of the department are for a suitable room for the cadet band and facilities for drill in rainy weather. Major Lewis, whose genial and kindly ways endeared him to every member of the university community, completed his detail this year. In him and his successor, Major Nance, the university has enjoyed and is enjoying the services of commandants who in personality and efficient leadership could hardly anywhere be equaled as incumbents of the military professorship.

**Mining and Metallurgy.**<sup>8</sup>—Mrs. Phoebe A. Hearst has contributed to the equipment of the department during the biennium a total of about \$12,500. This provision with some assistance from other sources has furnished the mining laboratory, the assaying laboratory, the senior metallurgical laboratory, the dry crushing and sampling plant, the gold and silver mill, the smelting plant, the machine and wood-working shops, the draughting and designing room, the lecture room with electric lantern and slides, the reading and locker rooms for students, and a beginning toward the museum of mining and metallurgy, which is ultimately to occupy the entrance vestibule.

During the past few years there has been a notable decline in registration in this college, representing a general tendency in mining schools throughout the United States. This is attributed by the professor of mining to the lapse in interest in mining following the Klondike, Cape Nome, Tonopah, and Goldfield discoveries; to the undue multiplication of technical schools in America; to the disturbances in Mexico; and in part to the changes in entrance and graduation requirements in the engineering colleges.

**Oriental Languages.**—The recent establishment of the republic of China promises greatly increased intercourse between that country and the United States and will lend new interest and impetus to the study of the Oriental languages and place added responsibility upon the University of California for instruction in these branches. There are now from 200 to 300 students enrolled in the department; most of them, however, in the lecture courses, the language students generally numbering between 40 and 50. The professor of Oriental languages pleads

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<sup>7</sup> See p. 28.

<sup>8</sup> See gifts to the department of mining on p. 274.



for a recognition of Chinese and Japanese in fulfillment of the foreign language requirements, but the Academic Council has not so far deemed it wise to accede to this request.

**Palaeontology.**—"In August, 1911, the department of palaeontology moved to Bacon Hall, where it occupies the second and third floors on the east side of the building. This change has given room for laboratories, without which it would have been very difficult to handle the increased classes. There are also additional facilities for research students, who could not find adequate quarters in South Hall. For the storage and exhibition of the large collections now available in this department there is still insufficient space and the greater part of them are stored in the basement of California Hall. These California Hall collections are removed by considerable distance both horizontally and vertically from the work rooms in Bacon Hall, and it is very difficult to transfer material from one building to the other. For exhibition of collections there is need of considerable additional space in Bacon Hall. In addition to the space available, the department should have an area amounting to at least 50 x 25 feet for exhibition of collections needed in research.

"During the past two years the number of students taking work in palaeontology has increased very considerably and two new courses have been added. The increase presenting the greatest amount of actual work achieved is apparently in the graduate courses. At the present time there are 15 students enrolled for advanced work and of this number four are candidates for the degree of doctor of philosophy. The research work carried on by graduate students covers a wide range of subjects and a considerable number of valuable scientific contributions have been made by these students within the biennium. Field work and research carried on by the department include principally the following investigations: (1) The Cenozoic deposits of the Great Basin region, ranging from an investigation of the Mohave Desert region north through Nevada and into southeastern Oregon. Within the last two years three expeditions have been sent out into this district. (2) A study of the famous Pleistocene asphalt at Rancho La Brea. At the present moment a force of 15 men is engaged in excavation work at this locality, under the direction of Mr. R. C. Stoner. A wonderful collection of splendidly preserved remains is being obtained in these deposits and this addition to the collections of the department will presumably be one of the best representations of prehistoric life obtained in America. (3) A study of the Cenozoic formations of the Coast Range region of California. Ten or twelve students have been engaged almost continuously on this work for several years past, and the results of their investigations constitute a very valuable contribution to science. In connection with the study

of the Coast Range formations the research work carried on during the summer school has been one of the most important factors. This work is carried on under the most favorable conditions, and during a period of five or six weeks the students are able to devote their entire attention to investigation work.

"The plans laid down for future work by the department include a continuation of the studies now under way for a period of several years, with the hope that each of these investigations may be sufficiently well worked out to make the contributions matters of world interest rather than a solution of purely local problems." (Summary by Professor Merriam of his annual report to the President.)

**Pathology and Bacteriology.**—The work in Berkeley is adequately housed in the building originally erected for the use of the laboratories of hygiene and pathology and has been satisfactorily equipped by special appropriation. The teaching at Berkeley is both graduate (medical) and undergraduate. The attendance in the undergraduate courses in bacteriology in the last year was 52, the students coming from the colleges of agriculture, civil engineering and natural sciences. The "concentration method," which is now widely approved, has been pursued in the graduate courses for medical students, the endeavor being to present pathology not in the usual, clinical-case method, but as a biological science, involving the study of each disease process and disease entity in turn through the successive stages of causation (bacteriology), progress (infection and immunity) and effect (morbid anatomy). In the words of Professor Gay: "We do not study the typhoid bacillus in one semester followed months later by a study of the lesions of typhoid fever, but in a series of days study the causative micro-organism, its mode of infection, the immunity reactions it produces in animals and human beings, and, finally, the lesions produced in those that succumb to its infection. The student is thus thoroughly grounded in typhoid fever as a disease entity before seeing the necessarily fragmentary aspect of the disease presented by a clinical case."

Applied or clinical pathology, now under the charge of a new member of the staff, Professor Jean V. Cooke, is taught in the former veterinary building at the Affiliated Colleges, where there is a modern autopsy room, pathological laboratory, and museum and laboratory for medical chemistry; but the building is in need of further equipment. Dr. Cooke, as hospital pathologist, will give systematic instruction in the conduct of autopsies with study of the post-mortem findings, and will be responsible for the routine examinations of tissues for diagnosis.

The department staff is active in research. In all eighteen articles have been published in the past two years and several more are in progress. Research courses are offered in neuropathology and in problems of immunity. A research fellowship in pathology is much desired.

**Physical Culture.**—The noteworthy feature in recent development in this department is the option offered to freshmen of outdoor sports, whether tennis, baseball, track, basketball, or football, in lieu of the heretofore required gymnasium work. The department is anxious to provide and supervise similar opportunities to upper-classmen through free elective courses, but cannot take this step until further fields become available, the present grounds being entirely occupied by the freshmen classes. At the same time the elective indoor work progresses, there being in all twelve classes, varying in numbers from 35 to 140, with admission denied to some applicants for lack of room.

**Physics.**—The professor of physics reports in part as follows: "The plans for making the course of the lower division stronger and more effective, begun with the appointment of Professor Minor in 1909, have been put into execution and are plainly bearing fruit. The expectations with which that appointment was made have been realized already to an extent that justifies it completely; but the results are in the nature of such a case cumulative, and must show themselves even more evidently in the immediate future. . . . The case of Professor Lewis illustrates instructively the important part played by 'externals' in scientific teaching. He was the first to benefit by the enlarged accommodations in South Hall, the top floor being given over to his uses. The very large class of the first term, which has been handled with difficulty in the crowded spaces of the basement, was conducted with ease and notably increased efficiency in the new quarters." Professor Hall's vigorous initiative in directing the courses for prospective teachers of physics has won immediate appreciation." Professor Lewis enjoyed leave of absence in 1910-11 and Professor Hall in 1911-12.

**Political Science.**—Dr. Bernard Moses retired on July 1, 1911, and was appointed professor emeritus on the Carnegie Foundation. He was succeeded in the headship of the department by Professor David P. Barrows, formerly director of education in the Philippine Islands. Professor T. H. Reed was absent on leave from January to August, 1911, as executive secretary to the governor of California. The League of the Republic, under the guidance and supervision of the department, organized a series of lectures by authorities outside the university on subjects of current interest to the students as citizens of the state. The department is receiving with increasing frequency requests for advice on such matters as city charters, the form of initiative petitions, and the drafting of statutes.

**Romanic Languages.**—Attention has been chiefly centered in this department on the importance of instruction in the first two years. To this end the best teachers have been assigned to lower division courses and the sections have been kept as small as possible, so that the students might have the benefit of individual attention. The department seeks the

fullest coöperation of the history staff and welcomes, for example, courses in the history of Spain and her colonies in the belief that no philological training in the history of a language or of a literature is complete without accurate acquaintance with the general historical background.

**Semitic Languages.**—Rabbi Martin Meyer of San Francisco was appointed lecturer in Semitic history and literature in January, 1912; two students are working for the Ph.D. degree with major subjects in this department; and volume 2 of the publications in Semitic philology is complete.

**Slavic Languages.**—Courses in the following subjects have been offered in this department: elementary Russian, advanced Russian, Polish, Russian novelists, Russian literature, and Russian political institutions.

**Zoology.**<sup>9</sup>—The biennium witnessed a notable increase in graduate students in this department. Recent allotment of the lower floor of East Hall to zoology gave greatly needed room and provided working laboratory space for eleven students engaged in graduate work. The State Fish and Game Commission established in 1911 a coöperating fellowship in this department yielding an annual stipend of \$1200 for the determination of the scientific basis for protective legislation for birds; and in 1912 founded a second fellowship on an annual stipend of \$1320 for the study of the deer of the state. The department is coming to be consulted in considerable measure in matters requiring expert aid; inquiries, for example, have during the biennium been received from the United States Bureau of Fisheries, the United States Forestry Service and the Boston Park Commission. The professor of zoology mentions, among the various needs: an aquarium room and culture house adjacent to East Hall; a marine laboratory not too far away; a course in biology applied to the household for students in domestic science; ampler library funds for current literature and for filling out sets and monographs of the past; and undergraduate and graduate assistantships.

<sup>9</sup> See list of gifts to the department of zoology on p. 278.



## ALUMNI SECRETARY

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BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: I have the honor to submit herewith, my second biennial report, covering the period from July 1, 1910, to July 1, 1912.

The Alumni Association of the University of California was organized for the purposes of fostering scientific and liberal culture on the Pacific coast, of prompting good-fellowship and kindly feeling among its members, and of advancing the interests of the University of California. With a view to effecting these purposes, a voluntary association has been continuously maintained since its organization in the early seventies. By virtue of the amended constitution adopted in 1896, all graduates of the university regardless of department, are members. The business of the association is transacted through a governing body or council, consisting of five officers and ten councilmen. The constitution authorizes a representative from each of the professional departments of the university.

The two following points are significant of the comprehensive nature of the organization: (a) Membership in the organization is acquired by receipt of a degree from the university. This results in a division of its members into active and non-active groups hereinafter spoken of. (b) The membership of the association and the constituency of the board of directors present a symposium of the graduates of all departments of the university. These circumstances have the effect of bringing together on commencement day, at the annual alumni reunion, for the first time in their college careers, men and women from every department of the university—from the law school, the medical school, the dental and pharmacy departments, and from the several colleges of the academic department. This association is



continued in all alumni gatherings, and is an attractive feature, particularly in the life at the alumni clubs.

The expenses of the association are met by dues of three classifications: annual, six-year, and life. Payment of dues, as has been explained, is not a prerequisite to membership. Necessarily, paying members constitute the real strength of the association, of which description there are some nineteen hundred graduates. Such members are usually regarded as "active," in contrast to the larger or "non-active" class. One of the fundamental duties of the secretary is to increase the number of the former, and to reduce the number of the latter description of members.

Before leaving the point of organization I beg to state, that permanence is given to the work of the councilors by virtue of a provision of the constitution, whereby only one-half of their number is retired annually. But an impulse of continued, fresh activity is furnished by virtue of the fact that officers of the association are elected annually. The addition of new men to the council and board of officers is a necessity, indeed a vitally important factor in the successful conduct of the work of the association. To this general statement I wish to make one important exception: The secretary must be a permanent officer of the association, and one in intimate connection with the life of the university from the point of view of the faculty, administrative officers and students. He is the chief factor in instilling a continued interest in, and a regard for the university, on the part of the members of the association. A wide acquaintanceship among the graduates is a necessary detail of his work, but such an acquaintanceship would be of little value, were the secretary either from pressure of other duties, or by virtue of the character of his associates out of touch with faculty and student thought and action.

In working out the purposes of the association, the council rightly has developed certain policies of a permanent character. The annual meeting following the commencement exercises, has become a habit with us; the secretary, like alumni secretaries in all the stronger alumni associations in the American colleges, maintains a fairly accurate, but constantly changing list of gradu-

ates and their addresses; the secretary does something to assist graduates in securing employment; he coöperates in the organizing of local geographical clubs; he conducts a mass of correspondence with members of the association; and he manages and edits the California Alumni Weekly.

The annual meetings for the past two years have been remarkably well attended: that of 1911 by approximately 300 graduates; that of 1912 by approximately 500 graduates. The luncheon preceeding the meeting in 1912 was an unusually picturesque and happy occasion. It is suggested that something could be done by either special committees, or by University of California clubs, in the nature of entertainments, processions or carnival, at the conclusion of the annual meeting.

With reference to the alumni directory it should be stated, that the association receives the coöperation of the university in maintaining, and from time to time publishing, a list of the graduates, their addresses, occupations, etc. The last published directory was in 1910. A new directory should be published in 1915, and thereafter at intervals of five years. These publications rapidly go out of date, both by addition of new classes, and by changes of address of members of the association. At the present time the number of degrees conferred by the university total 10,701. Of this number 3,142 have been awarded to alumnae. Of this total number again 3,260 have been awarded to graduates of professional departments. Five hundred and twenty alumni are recorded as deceased. Since the publication of the last biennial report, a new department of the university has been established, with the result that 41 of the new members of the association are graduates of the medical department of the university situated in Los Angeles. Officers of the university and members of the alumni association should be urged to use the alumni addresses more, and to collaborate in revising the lists to what extent they may be able to do.

During the past two years the alumni secretary has not been connected with the university appointments office, but he has been able to some extent, to assist the graduates in securing positions. This work should receive the careful consideration of the alumni council, and to make it more effective, the establish-

ment of branch offices at the University of California clubs in San Francisco and in Los Angeles, is suggested.

In the organization of new geographical clubs, the association has taken an active part. A standing committee of the council is in charge of this work. In the fall of 1911 this committee was instrumental in arranging a series of engagements and entertainments to President Wheeler and Mr. James K. Moffitt, president of the alumni association, in various interior portions of the state, especially in southern California. The results of this trip were highly beneficial to the university and to the association. Similar trips for prominent alumni and officers of the university should be arranged semi-annually.

The alumni association viewed with deep apprehension a serious proposal on the part of the legislature of 1911 to establish a technical college unconnected with the university. A great deal of documentary evidence of the highest character was obtained, to the effect that such an institution would be an unfortunate duplication of a large proportion of the university plant. Such a duplication, it was clearly apparent, would reduce the financial support of the university, would derogate from its high position as the unique head of a unique system of common school education, and would divide the system of education by placing at its head, two institutions instead of one. It would tend to sectional jealousy, to expensive duplications by the state of educational machinery, with lessened efficiency and higher expense as the inevitable result. The unfortunate experience of many states to this same end, was considered. The result of all these arguments was successful in 1911, and it is certainly the hope of every loyal graduate of the university, that never again so long as the state itself remains intact, will such a policy of educational suicide receive the serious consideration of any legislature.

In fostering the purposes of the association, the council conducts generous miscellaneous correspondence. Much of this is with the members of the association. Its tendency is to increase, and it is hoped that every member of the association feels himself at liberty to discuss with the officers of the council, and particularly with the secretary, any matter of importance to the



association, to the alumni body, and to the university. Since the establishment of the California Alumni Weekly, a medium for regular interchange of ideas among the members of the association, is furnished. The subscription list of the paper is increasing, its quality has greatly improved, and it has undeniably assumed a permanent place in the homes of the university graduates. Every alumnus and every former student of the university should get the Alumni Weekly habit. Every loyal officer of the university and every loyal member of the association should become a proselyte to this end.

It is suggested that officers of the association and class secretaries begin at the football reunion this fall preparations for a general alumni reunion and celebration at the occasion of the Panama-Pacific Exposition of 1915.

In conclusion I may state, that in my opinion the attitude of the graduates of the university towards their alma mater has greatly improved in the past few years. University loyalty is assuming characteristics of devotion comparable to religious faith or filial love. The council feels that this is as it should be, and as the university grows and becomes more and more an institution, not only of higher but of the highest learning, this devotion will strengthen and ripen into an alumni spirit second to none other known to the writer. The association is to be congratulated on the following list of officers, who were chosen at the May election for service during the succeeding year: J. Arthur Elston, '97, president; H. W. O'Melveny, '79, 1st vice-president; Charles H. Bentley, '91, 2nd vice-president; Duncan McDuffie, '99, treasurer; Herman H. Phleger, '12, secretary. Councillors: Frank Otis, '73; Mrs. H. Cooper Douglas, '02; William A. Powell, '02; Lewis D. Bohnett, '06; Warren C. Gregory, '87; Mrs. E. B. Stanwood, '98; A. E. Graupner, '97; Haydn M. Simmons, '95; Dr. Wallace I. Terry, '92; Douglas Brookman, '10; Dr. H. C. Peters, '02.

Respectfully submitted,

MILTON T. FARMER,  
Secretary.

## APPOINTMENT SECRETARY

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BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: The work of the Appointment Secretary grows increasingly difficult. When the office was created, fifteen years ago, the course of study in most of the high schools of the state was exceedingly simple. English, history, mathematics, Latin, one modern language, one or two sciences were offered, and candidates for teachers' positions followed two or three of these subjects in college, and had no difficulty in adjusting themselves at graduation. Now the center of interest has shifted from the so-called "culture" subjects to those which make for social and industrial efficiency, and the university has made little or no change in its method of preparing teachers; in fact while the schools have been broadening the curriculum, the university has insisted upon greater and greater concentration on one or at most two lines of work, preparing more teachers than the schools can receive in the traditional subjects, and making no provision to meet the new demand.

The schools still turn to the university for guidance. In no previous year has the demand for teachers been so great as it was this year, but the office has been unable to harmonize what the university offers with what is demanded. There is no question that this demand will be met elsewhere, if we continue to disregard it. The state normal schools, which were designed to supply the ranks of the 10,000 elementary school teachers of the state, are reaching out toward the high schools, whose force of 2000 teachers could easily be recruited by the universities. They are



planning to supply the immediate demand for teachers of domestic science and arts, manual training, industrial and mechanical arts, drawing and music, agriculture, physical training and hygiene.

So difficult has it been for the schools to obtain teachers of these subjects that the law permits the issuance of special certificates, practically at the discretion of county boards of education. The effect on the standards of the secondary schools of employing teachers with little or no academic training and often the mere semblance of knowledge of the special work required is disastrous. The principals realize it, and call upon us for relief. California high schools have been justly celebrated for their thorough scholarship. Can the university afford to contribute to the undermining of the standard of the schools by turning a deaf ear to this demand? Self interest alone would seem to indicate the necessity for vigorous action, since the maintenance of scholarly standards of work in the university must depend upon the sound foundation provided in the secondary schools. Moreover a state university is the keeper of the intellectual faith, responsible for the integrity of educational ideals of the whole state. The question now before us is, "Shall we relinquish our intellectual leadership?"

Respectfully submitted,

MAY L. CHENEY,  
Appointment Secretary.

## SAN FRANCISCO INSTITUTE OF ART

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SAN FRANCISCO, July 1, 1912.

*To the President of the University,*

SIR: I have the honor to submit the following report of the San Francisco Art Association, San Francisco Institute of Art, for the two years beginning July 1, 1910.

The affairs of the institute continue to show a gratifying condition both in the scope of its undertakings and the success which has attended them.

*Regular Exhibitions.*—The paintings and sculpture owned by the association have been kept on view for the benefit of the members and the public except when special exhibitions have required their temporary removal. An admission fee is charged all but members except on Tuesday and Saturday, when the public is admitted free of charge. The public is also admitted free of charge to all exhibitions having a special educational character.

*Special Exhibitions.*—The following is a list of the special exhibitions held during the two years: November 17, 1910, opening of the Emanuel Walter Galleries, evening reception; December 24, 1910, to January 3, 1911, exhibition of elementary work done in the public schools of the different states, held at the time of the Convention of Public School Teachers of the state; January 27 to February 10, 1911, original drawings and paintings made for illustrations for Harper's Magazine, exhibited at the Arts Club, New York; January 27 to February 10, 1911, exhibition of studies in drawing, painting and design of the art schools of the eastern states; February 11 to February 25, 1911, exhibition of water colors by eastern artists; February 11 to March 20, 1911, "The Two Disciples at the Tomb," by H. O. Tanner, courtesy of the Chicago Institute; March 3 to

March 30, 1911, annual spring exhibition of the San Francisco Art Association, works of California artists, in all mediums; March 25 to April 6, 1911, exhibition of drawings and paintings by American illustrators; April 20 to May 5, 1911, Herman Clementz' painting "Golgotha," courtesy of Hon. James D. Phelan; May 12 to May 20, 1911, exhibition of the School of Design; July, 1911, coincident with the meeting of the National Educational Association's Convention, the art department of which held its sessions in the Institute, by invitation, an exhibition of the art work of the public schools of San Francisco; December 22, 1911, to January 13, 1912, a collection of oil paintings, water colors and sculpture, constituting the annual exhibition of the California Art Club, of Los Angeles, and brought to this city by the Art Association; February 12, 1912, collection of school work of the Pratt Institute of Brooklyn, New York; April 4 to May 2, 1912, annual spring exhibition of the San Francisco Art Association, works of California artists in all mediums; May 17 to May 31, 1912, annual exhibition of the School of Design. In addition to the foregoing special exhibitions the Down Town Association was granted the use of the institute in which to conduct a competition for a design for a monument commemorating the rebuilding of San Francisco, the designs being placed on exhibition to the public. Lectures and receptions were also given for the benefit of artists, members of the Association, and students of the School.

*The School of Design.*—The attendance at the school has steadily increased, the enrollment for 1911 being 341, and for 1912, 377, the largest in the history of the school. The discipline has been excellent, and the industry and spirit shown by the students most encouraging. Two new departments have been added, one for instruction in illustration and the other for all kinds of process reproduction, including etchings, halftones, etc. The department of decorative design has been broadened and its work has attracted so much favorable comment that a traveling exhibition of it has been sent out to the high schools of the state with excellent results. Twelve annual scholarships are granted by the Association as a reward for merit, or to assist

those who have ability but are unable to pay the school fees. The scholarship and Paris medal of the Julian Academy is also maintained.

*Gifts to the Association.*—The following gifts have been made to the association: From Mr. Edward F. Searles, a collection in stucco of famous Greek and Roman intaglios, numbering 746 pieces; from a group of friends of the artist, a large oil painting (80 x 87) by Joseph Raphael, entitled “La Fete du Bourgmestre Captain Van den Broek”; portrait in oil, by Oscar Kunath, presented by Colonel Frank W. Sumner; from Mr. Frederick Yates, two studies in oil, one by H. S. Forbes and one by S. A. Mowbray; from Mr. Albert C. Hooper, a large engraving (59 x 28) by Bernard Picart; from Mr. John I. Walter, a framed photograph of the buildings and grounds of the Mark Hopkins Institute of Art; additions to the library consisting of 7 volumes and 69 unbound magazines, pamphlets, etc.

*The Emanuel Walter Galleries.*—Additions to this collection were one oil painting by Arthur B. Davies (14 x 18) entitled “Of the Attica Hills,” and two colored drawings by the same artist, acquired by purchase.

In accordance with the plans of the Association, its officers and instructors have done everything in their power to aid and encourage art movements and education in the city and state. In this connection it seems proper to invite attention to the fact that the 28th of March of last year was the fortieth anniversary of the founding of the association. Unendowed, as it is, probably there is no institution of the size of the San Francisco Institute of Art, so entirely dependent on its own limited resources, that is carrying on work of such importance. In addition to its lectures, exhibitions and other efforts in the interests of general culture in the community, in the past forty years its school has provided many teachers of art in the public and private schools of the state and elsewhere, while a long list of successful artists in many walks of life attest its practical usefulness.

Respectfully submitted,

VANDERLYNN STOW,  
President.



## DEAN OF WOMEN

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TAORMINA, SICILY, July 18, 1912.*To the President of the University,*

SIR: I have the honor to present the report upon the work of the office of the Dean of Women for the years 1910-11 and 1911-12. At the beginning of the period which this report covers, the work of the office had grown until it seemed necessary to have assistance. In October, 1910, Miss Lucy Ward Stebbins was appointed Assistant Dean of Women and Lecturer in Charities. And I am happy to say that it is to her, upon the acceptance of my resignation in July, 1912, that I hand over the office. Her appointment not only enabled us to accomplish the former work with greater thoroughness but it also made possible several valuable experiments. For the most part our work was separate, as were our offices. In general, Miss Stebbins undertook the inspection of boarding-houses for women (under the committee on outside relations); she investigated the possibility of co-operative buying among the clubs and fraternities and started a scheme leading in that direction; she took charge of the "Campus House," an experiment in a sort of co-operative dormitory; and she visited the sick students and those who were doing their own housekeeping. I still kept charge of the trust funds in the office, and continued the work on the scholarship and club-house loan fund committees; I remained the "advisory member" on the associated women students' executive committee and the "arbitrator" at College Hall, a private dormitory, and launched two experiments, the "Partheneia" and taking students on weekly excursions to see social conditions in San Francisco and its neighborhood; and held, throughout the year, my Friday



afternoons "at home." Of course we both kept regular office hours.

The work of the study-list committee we shared. For the year 1910-11 six faculty advisors volunteered to help with the work among the entering women students; in 1911-12, seven advisors were appointed at the nominal salary of one hundred dollars a year. To each advisor was assigned a group of twenty-five freshman women; Miss Stebbins and I each kept one hundred and twenty-five. During the last year, the advisors had complete charge of the study-lists of their freshmen throughout the year. The wives of the advisors, during the first week, undertook to look up any of the students who were neither living at home nor in approved boarding-houses and their verdicts of these houses were temporarily taken. Later these houses were regularly inspected by Miss Stebbins. Throughout the year these faculty ladies, helped by the senior advisers, tried to keep in touch with their freshmen, inviting them to their homes several times a term. By a card system which included reports from the faculty advisors, the infirmary, the recorder's office and from myself, exchanged three times each term with either the club or fraternity to which a freshman belonged or with her senior advisor if the freshman lived in a boarding-house, the scholarship, health and general welfare of each freshman was more closely followed than before. In spite of this, neither Miss Stebbins nor I feel the plan to be quite successful; and next year an attempt will be made to supervise the study lists through graduate students paid for their services for the first two weeks of the term. Miss Stebbins herself will undertake the work during the rest of the year.

As for the committees in general, I feel that the office could be made more effective if the dean of women were, as a matter of course, a member of the committees which concern themselves with the general welfare of students. During these last two years she has been made a member of the committees on outside relations and on scholarships. She is not yet officially a member of the students' affairs committee (but the present relation is so satisfactory, it would, perhaps, not be wise to change it), nor

is she in any way connected with the welfare committee. This often results in injustice and waste of effort.

A few small trust funds have been administered through the office. Certain amounts which were given to me personally for the benefit of students at the time of the San Francisco fire have been returned by the students and have, since then, been kept as a loan fund. The loans have varied from two to fifty dollars and in every case have been repaid within or before the specified time. The Prytanean Society established a loan fund of two hundred dollars in 1910 and last year added sixty-one dollars to it. The Dean of Women is a member of the committee to administer this very useful little fund. In 1910 the San Francisco branch of the Association of Collegiate Alumnae also established a loan fund of five hundred dollars for the benefit of students at Stanford and the University of California. Miss Stebbins has been a member of the committee to manage this fund.

The old question of dormitories has now and again agitated the student world. Several attempts to raise money for this purpose have been made. The accumulation of several years, \$2021.04, was handed over to the Regents in January, 1912. This sum does not include the \$700 raised by the Association of Collegiate Alumnae in August, 1909, and temporarily used to furnish a club house. Nor does it include the \$5000 given to me by Mrs. Margaret Fowler "to help in solving the problem of housing women students," which is now in the hands of the club house loan fund committee but which might eventually be used for the dormitory. In the meanwhile, through the club house committee Mrs. Fowler's fund has furnished 4½ clubs (the money being always repaid to the fund) and last year, as a guarantee fund stood behind the experiment of "The Campus House." This house on Sylvan way was put into good condition by the university and let to the club house committee at a low rental. It was managed, under Miss Stebbins' supervision, by a salaried house-mother. It accommodated twenty students, who gave an hour a day to the house in addition to \$20 a month for room and board. The house has succeeded

from the beginning: it has met expenses; the self-government league has managed itself successfully; and, through the help of Mrs. Jaffa, the house has worked out a dietary which it is hoped may be a useful model for the clubs and fraternities. I hope we may have more such houses.

Indeed, I hope the day of dormitories is not far off. The experiment of the private dormitory "College Hall," while it is not completely satisfactory because students will not regard a place not managed by the university as a real university dormitory and because the university has only such supervision there as it has over other housing places for students and because the dean of women has only such rights as are accorded to her personally (not officially) by the self-government league and by the proprietress, is still successful enough to deepen the faith in the principle of dormitories for western students. I believe that eventually the university will have to undertake at least the financial risk of managing a dormitory even if it will not undertake the financial risk of building one.

Until then clubs and fraternities seem the best substitute. In the two years which this report covers the club-house loan fund committee has furnished four men's and five women's clubs. One woman's club which was furnished through the yearly contribution of one thousand dollars by the California Federation of Women's Clubs, failed to meet expenses and was reorganized under a new name. This case is the only approach to a failure that we have ever had among the eighteen clubs established by the committee.

Several unsuccessful attempts have been made to form the clubs and fraternities into some general organization for the purpose of co-operative buying. These attempts failed partly because the students have no capital to advance and partly because they are suspicious of anything that seems to threaten their complete independence. The women's organizations by trading at common stores have obtained certain reductions. The club-house committee has this Spring advanced money to those organizations which wished to "put down" eggs but had not the necessary capital. In such small ways, we hope gradually



to lessen the expenses and improve the dietary. In another year or so, I think a definite scheme for co-operative buying may be in process.

Self-government among the women students grows steadily in scope and in value. Two years ago they requested that they be allowed to form a woman's undergraduate student affairs committee to take charge of all disciplinary matters, specific or general. This committee has done admirable work not only in the very trying special cases referred to it but also in making general suggestions. For instance, the request that the boarding-houses of freshmen women be approved by the dean of women, emanated from it. All such work, which naturally falls to seniors, will be made more effective through the charming little "Senior Women's Hall" which the women have built in Strawberry Canyon. Miss Julia Morgan, who planned the building and gave her services, has helped the women in a very genuine way.

Interest in athletics has not developed as fully as it may among the women. This is partly because no one has athletics in charge. In 1910, the Sports and Pastimes Association passed the resolution that all athletic teams must be under the supervision of the university medical advisor and that no group of women representing the university should leave the campus without the permission of the dean of women or the executive committee of the associated women students. While this regulation is indeed an improvement, it is not enough. I earnestly hope that another year will see the appointment of someone in the department of physical culture who will supervise women's sports and that such supervised sport, under certain specific conditions, will be given regular gymnasium credit. Basket-ball, tennis, rowing, the women already have and if Mrs. Hearst's generous gift for the swimming-pool can be utilized, they will soon have swimming. At present writing it is still uncertain whether Hearst Hall is to be moved to a place where women's athletics cannot live,—where basket-ball field, tennis courts and swimming-pool cannot be arranged in conjunction with the gymnasium. That such real interests of the women could be so seriously imperilled without their knowledge seems evidence of what I said

before, that some one representing the women students should be on all committees which deal with the general welfare of all students.

During the year 1911-12, the women students wrote and performed an original Masque,—an event of deep significance. The afternoon discussions at my house gave the impetus of this attempt. I have been “at home” to all women students on Friday afternoons. Senior advisors formed the habit of bringing their freshmen (we numbered from twenty to a hundred and fifty) and in the course of the afternoon we had a half hour of poetry. The eager response with which this was met, convinced me that the students did not have sufficient opportunity within the university either for creative art work or for participation in productions which aimed solely at beauty. A committee of faculty and students organized a competition. Twenty-six preliminary plans were submitted, many of high quality. The one which attained first rank in its final form was a Masque, “The Parthenia,” by Anna Rearden. Those who saw it in the sunshine and shadow under the LeConte Oaks will never forget the vision of color and form. But those who worked with the four hundred and twenty students who took part in it and with the numberless committees which brought the complicated machinery into running order, will agree with me that participation in such a performance is of sound educative value and will hope with me that provision for a regular yearly performance will be made by the university. The training for the chorus dancing could well be made a part of a regular course in physical culture. Plans for another competition were completed before the end of this college term. Before the beginning of next, I hope someone may be appointed to take charge of the second “Partheneia.”

The conferences of deans of women which I have attended from time to time have been both stimulating and instructive. I have gained many practical suggestions on such general problems as the introduction of the study of sex hygiene into the college course, the organization of a course in domestic economy and the interesting of students in current social and civic problems. It is significant that most of the questions discussed at



these conferences during the last two years have related in some way to the questions of "new vocations for trained women." This is partly a revolt against turning the university into a normal school: for the number of teachers among the graduates has been disproportionately large. The courses which most universities are developing along the many-branching pathway of domestic economy and along the almost equally diversified path of "civics and philanthropy" have been slow in reaching California. The question is not so much *whether* they will reach us, as *when* and *how*. I believe that upon the wise development of these courses depends the future of the education of women.

Respectfully submitted,

LUCY SPRAGUE MITCHELL,  
Dean of Women.

## DENTAL DEPARTMENT

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SAN FRANCISCO, July 1, 1912.

*To the President of the University,*

SIR: I beg to submit the following as the report of the Dental School for the sessions of 1910-11 and 1911-12.

The equipment of the school has been strengthened by the addition of a very complete X-Ray laboratory for research work, the installation of adequate electrical appliances for lighting and supplying power in the various departments and the installation of electric lathes for the prosthetic and operative laboratories.

A long felt want of the school was the appointment of all time instructors in the departments of operative and prosthetic dentistry; accordingly the faculty was greatly strengthened by securing the services of Dr. Fred E. Hart as instructor in operative technics and demonstrator in the infirmary. The quality of work done by the students and the infirmary receipts have both justified the step taken in this particular. With this unusually gratifying result the department has secured the services of Dr. Henry Morrow of the University of Iowa to act in a similar capacity to Dr. Hart, in the department of prosthetic dentistry. However, it is greatly to be regretted that owing to the unfortunate financial straits in which the university is placed, the latter appointment could only be made by reducing Dr. Hart's salary and shortening his time of service, thereby securing \$1800 toward Dr. Morrow's salary, the remaining \$600 of a \$2400 salary being contributed by the other members of the faculty.

Far more pleasing, however, than the above mentioned changes is the improved intellectual character of the students through the more strict rules of preliminary requirement, accompanied as it is by the gradually increasing enrollment. The value of this preliminary training and a proper college course was demonstrated by the fact that the entire senior class of 1911-12 was graduated and without a failure its members passed the state board examinations.

At the request of the medical faculty the dental faculty gave up its claim on a dissecting room in the veterinary building, that it might be used as a whole for pathological purposes.

As the dental curriculum is essentially composed of medical and dental subjects, it is the hope of the dental faculty that these strictly medical courses will some day be housed under the same roof and taught by the same instructors with the medical students; it would be more expedient both from an educational and economical standpoint.

Respectfully submitted,

JAS. G. SHARP,  
Dean.

THE EXAMINER OF SCHOOLS

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BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: I have the honor to submit herewith my report as Examiner of Schools.

The method of accrediting schools, as set forth in my two previous reports, has been continued during the two past years. This is an accrediting of the schools as wholes, and not by individual subjects. The standards by which accrediting is now accorded are: the general quality of the teaching; the spirit of the school, as shown in the relation prevailing between pupils and teachers; the average attainment and performance of the pupils in their classes; the character and scope of the course of study; the equipment of the school in buildings, laboratories, and library; and, finally, the attitude of the community towards the school, as shown by the degree of financial and moral support given the school. In addition to these tests within the school, I have carried out during the past two years the same careful statistical study of the performance of the graduates of each high school as shown in their work in the university. This study, details of which are given below, has been of very material aid in determining the standing of the various schools, as well as in stimulating the scholarship of the pupils.

So far as techincal "accrediting" is concerned, this has involved only a general examination of the school, as described above. However, during the past two years the plan has been followed of sending out a number of men as "school visitors," whose duties were rather to bring the university and the schools into closer and more sympathetic touch than could be accom-

plished by one general examiner, with so large a territory and so many schools. Each of these "visitors" spent a few weeks in the field, ranging from two to five. While it is not the function of the university examiner to report in detail upon the work of these visitors, I wish to go on record as heartily approving the plan. In my judgment, much good has been done, and, if possible, the plan should be continued. In a state so large as this, it is difficult enough at best to keep the university and the schools in proper relations, and it is well worth while for the university authorities, it seems to me, to make considerable effort to further the cordial relations that have been growing markedly within the past few years.

During the period covered by this report, the examiner of schools has devoted his time mainly to the newer and weaker schools. In the case of such schools, he performs a double function: he assists the schools, by advice and direction, to get in line for accrediting; and sees to it that they are not kept from accrediting when ready, nor admitted to the honor too soon. Much of the time of the examiner has been spent, too, in conference, in person or by letter, with boards of high schools.

Another feature of the examining of schools, that has been employed to great advantage during the past four years, is the making of a "supplementary list" of schools. These schools are those which, while not yet ready for formal accrediting, according to university standards, are nevertheless, rapidly approaching the required standard. To such schools the privilege of recommending their graduates of the current year for admission to the university without examination has been accorded. This plan has worked excellently. It has enabled the schools to take all the time needed to reach regular accrediting; and, at the same time, has not excluded worthy pupils from admission to the university on the same terms that other pupils from more favored schools enjoy. The privilege has never been abused: pupils so admitted have ranked equally well with those from the regularly accredited schools.

In the period covered by this report, the examiner has personally visited about one hundred and sixty-five schools. Each



year sees high schools started in more and more remote parts of the state. Consequently the time and travel necessary to visit the schools is greater than has been required heretofore in visiting the schools which were nearer to the centers of population. The total distance traveled has been approximately 19,000 miles; the expenses of the examiner have been about \$975 for the term involved.

The statistical study of the records made in the university by the graduates of the schools, to which reference was made above, has been continued. The results of this study as applied to the general standing of the freshmen from each school are given below. Combined with the data given in my previous report, the present record gives a complete view of all the freshmen and of each school for the past eleven years.

The method employed was fully explained in previous reports, and a knowledge of it may be assumed here. Only the results are given here. In table I is presented a complete view of the freshmen classes of public high school pupils for the whole term of eleven years.

TABLE I

*General view of the eleven freshmen classes. Graduates of public schools.*

Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Index Figure	2.56	2.58	2.57	2.49	2.48	2.51	2.50	2.49	2.41	2.44	2.43
No. of Freshmen											
Considered	383	458	401	455	391	431	428	472	546	567	603

The interesting fact brought out by this table is that with the method of accrediting schools in vogue for the past five years the scholarship of the incoming classes has shown a very marked improvement. With the great increase in the size of the classes we might expect a possible falling off in scholarship; but the opposite has been the case.

In Table II, below, is given the individual record of each public high school. This table supplements, and continues the data given in my previous report in Table VI. Together, the two tables give a complete view of the record of all public high schools having the right to recommend to the university for the eleven years, 1901-1911 inclusive.

TABLE II \*

*Division A*

## North Coast Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Arcata	2.77 (3)	..... (0)	Healdsburg	2.08 (1)	2.38 (3)
Cloverdale	..... (0)	3.33 (1)	Lakeport	2.61 (1)	1.94 (1)
Crescent City	2.51 (8)	2.57 (1)	Mendocino	..... (0)	2.56 (2)
Eureka	2.57 (9)	2.76 (8)	Petaluma	3.14 (2)	2.76 (3)
Ferndale	2.72 (3)	2.31 (3)	Santa Rosa	2.86 (5)	2.50 (6)
Ft. Bragg	2.45 (2)	2.69 (5)	Sonoma	3.62 (1)	2.38 (2)
Fortuna	2.77 (1)	..... (0)	Ukiah	2.20 (2)	2.19 (2)
			Willits	(0)	(0)

*Division B*

## North Interior Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Chico	2.56 (1)	2.62 (4)	Oroville	2.07 (5)	2.29 (3)
College City	2.73 (1)	2.91 (2)	Red Bluff	2.40 (1)	2.31 (3)
Colusa	3.16 (2)	3.01 (4)	Redding	2.49 (3)	2.33 (2)
Corning	..... (0)	2.43 (2)	Sacramento	2.43 (13)	1.70 (13)
Elk Grove	2.63 (3)	2.39 (1)	Sutter City	3.60 (1)	3.00 (2)
Esparto	3.16 (3)	..... (0)	Willows	..... (0)	2.54 (4)
Etna	2.72 (4)	2.77 (1)	Winters	(0)	(0)
Gridley	2.46 (3)	2.88 (3)	Woodland	2.70 (1)	2.72 (4)
Marysville	2.55 (2)	1.67 (2)	Yreka	2.78 (1)	3.00 (1)

\* NOTE.—The upper figures under the year, after the names of the school give the scholarship record, called the *index figure*; the lower figures indicate the number of freshmen considered in making the calculations. A zero indicates that for the given year the school was not represented in the freshman class at the university.

*Division C*

## Bay Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Alameda	2.35 (10)	2.60 (15)		(2)	(1)
Antioch	1.97 (2)	..... (0)	Oakland H. S.	2.22 (50)	2.21 (45)
Benicia	..... (0)	3.27 (4)	Oakland Poly.	2.64 (3)	2.26 (8)
Berkeley	2.29 (65)	2.30 (99)	Redwood	..... (0)	..... (0)
Brentwood	..... (0)	1.88 (1)	Richmond	3.57 (3)	2.01 (6)
Centerville	..... (0)	2.74 (3)	St. Helena	2.38 (3)	..... (0)
Concord	2.71 (3)	3.26 (4)	San Francisco:		
Crockett	2.30 (2)	..... (0)	Girls H. S.	2.08 (6)	2.35 (14)
Dixon	1.75 (1)	3.16 (2)	Lowell H. S.	2.27 (41)	2.16 (30)
Fairfield	2.18 (1)	2.24 (2)	Mission H. S.	2.34 (14)	2.59 (7)
Fruitvale	2.86 (10)	2.57 (11)	Polytechnic H. S.	2.57 (4)	2.66 (2)
Hayward	2.46 (2)	2.65 (7)	San Mateo	3.39 (1)	..... (0)
Livermore	2.19 (3)	3.21 (3)	San Rafael	1.88 (2)	1.91 (3)
Martinez	2.51 (3)	..... (0)	Vacaville	..... (0)	2.55 (1)
Napa	1.94	2.36	Vallejo	2.66 (5)	2.87 (6)

*Division D*

## Central Interior Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Bakersfield	2.73 (4)	2.62 (6)	Modesto	..... (0)	3.14 (2)
Clovis	1.41 (1)	..... (0)	Newman	2.42 (3)	2.20 (4)
Dinuba	2.35 (1)	2.59 (3)	Oakdale	2.15 (3)	..... (0)
Fowler	2.82 (2)	3.04 (4)	Oleander	2.21 (2)	3.31 (1)
Fresno	2.02 (8)	2.22 (8)	Porterville	..... (0)	2.81 (3)
Hanford	2.68 (3)	2.88 (3)	Reedley	1.94 (1)	..... (0)

## PRESIDENT'S BIENNIAL REPORT

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Kingsburg	.....	2.13	Sanger	2.59	.....
	(0)	(1)		(2)	(0)
Laton	(0)	(0)	Selma	.....	2.09
Lemoore	.....	3.81		(0)	(2)
	(0)	(1)	Stockton	2.14	2.59
Lodi	2.81	2.52		(6)	(11)
	(4)	(3)	Tulare	2.19	3.10
Los Banos	3.23	3.40		(1)	(1)
	(1)	(1)	Turlock	.....	1.52
Madera	(0)	(0)		(0)	(2)
Merced	2.74	2.55	Visalia	2.81	2.41
	(2)	(4)		(5)	(3)

*Division E*

## Central Coast Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Arroyo Grande	2.03	2.77	Mountain View	(0)	(0)
	(2)	(3)	Pacific Grove	.....	2.33
Boulder Creek	3.01	.....		(0)	(1)
	(1)	(0)	Palo Alto	(0)	(0)
Campbell	2.79	.....	Paso Robles	1.87	.....
	(2)	(0)		(3)	(0)
Gilroy	2.76	2.65	Salinas	2.43	2.53
	(4)	(6)		(2)	(1)
Hollister	2.58	2.07	San Jose	2.75	2.33
	(5)	(1)		(8)	(10)
Los Gatos	.....	1.48	San Luis Obispo	2.59	3.34
	(0)	(1)		(1)	(2)
Monterey	2.50	.....	Santa Clara	(0)	(0)
	(1)	(0)	Santa Cruz	2.71	2.55
Morgan Hill	.....	1.94		(6)	(1)
	(0)	(1)	Watsonville	1.79	1.77
				(3)	(2)

*Division F*

## Southern California Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Alhambra	1.86	.....	Los Angeles Poly-		
	(1)	(0)	technic H. S.	2.40	2.63
Anaheim	2.77	2.88		(7)	(11)
	(2)	(1)	Monrovia	2.94	2.34
Azusa	2.16	.....		(2)	(4)
	(3)	(0)	National City	1.77	.....
Bostonia	3.60	.....		(1)	(0)
	(1)	(0)	Oceanside	(0)	(0)
Chino	2.81	.....	Ontario	.....	3.00
	(1)	(0)		(0)	(1)
Colton	1.82	2.61	Orange	.....	2.07
	(1)	(3)		(0)	(1)

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Compton	2.11 (1)	..... (0)	Oxnard	(0)	(0)
Corona	2.78 (2)	..... (0)	Pasadena	1.87 (5)	2.15 (8)
Covina	2.57 (2)	3.22 (1)	Pomona	2.42 (5)	2.44 (3)
Downey	(0)	(0)	Redlands	2.50 (4)	2.05 (3)
El Monte	..... (0)	2.91 (2)	Redondo	(0)	(0)
Escondido	3.10 (2)	..... (0)	Riverside	2.68 (14)	2.57 (15)
Fallbrook	(0)	(0)	San Bernardino	2.64 (1)	2.93 (3)
Fullerton	(0)	(0)	San Diego	2.46 (7)	2.18 (8)
Gardena	2.86 (2)	..... (0)	San Fernando	2.67 (1)	1.97 (1)
Glendale	2.38 (2)	2.60 (1)	San Pedro	..... (0)	2.67 (2)
Hemet	..... (0)	2.30 (1)	Santa Ana	2.35 (7)	2.03 (4)
Hollywood	1.87 (2)	2.23 (3)	Santa Barbara	2.38 (11)	2.13 (2)
Huntington Beach	(0)	(0)	Santa Maria	2.94 (1)	1.89 (2)
Imperial	..... (0)	1.92 (1)	Santa Monica	2.47 (2)	2.46 (6)
Inglewood	2.91 (3)	..... (0)	Santa Paula	1.89 (1)	..... (0)
Lompoc	(0)	(0)	Santa Ynez	(0)	(0)
Long Beach	2.57 (6)	2.32 (3)	South Pasadena	1.87 (2)	2.85 (2)
Lordsburg	(0)	(0)	Ventura	2.00 (1)	2.35 (4)
Los Angeles High School	2.44 (27)	2.65 (22)	Whittier	1.79 (2)	2.93 (3)

*Division G*

## Mountain Region

SCHOOL AT	1910	1911	SCHOOL AT	1910	1911
Alturas	2.75 (1)	2.00 (1)	Ione	2.49 (3)	..... (0)
Angels	1.88 (1)	2.33 (1)	Nevada City	2.29 (2)	..... (0)
Auburn	2.45 (5)	2.17 (2)	Placerville	2.58 (4)	2.30 (4)
Bishop	1.97 (1)	2.65 (4)	Sonora	..... (0)	2.39 (6)
Cedarville	3.13 (2)	..... (0)	Susanville	2.88 (1)	2.00 (1)
Grass Valley	1.72 (2)	2.90 (3)	Truckee	2.48 (2)	..... (0)



## PRIVATE SCHOOLS

Thus far we have dealt with the California public high schools and the records of their graduates, as made in the university; below we present like data for the private schools of secondary grade, in California.

TABLE III IS COMPARABLE WITH TABLE I ABOVE

*General View of Freshman Classes from Private Schools*

Year	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911
Index Figure	3.00	2.98	2.98	2.76	2.92	2.63	2.68	2.78	2.73	2.71	2.63
No. of Freshmen	47	53	44	41	70	57	55	88	81	72	107

From this table, when compared with Table I, the striking fact is apparent that the graduates of the private schools of California do not do nearly so well in the university as do the graduates of the California public high schools. In no year has the *index figure* for private schools equalled in value, or even closely approximated, the *index figure* for the public high schools for the given year. On the other hand, it is right to call attention to the very decided improvement shown in the progress of the years in the table for private schools. With this *general index figure* for private schools should be compared the *individual index figure* for each private school, as shown in Table IV below.

Of the private schools listed above, fourteen are boys' schools, indicated thus (\*); seventeen are girls' schools, indicated thus (†); and the remaining six are co-educational schools.

Respectfully submitted,

W. SCOTT THOMAS  
Examiner of Schools.

TABLE IV

NOTE.—The upper line of figures after the name of the school represents the *index figure* of the school for the various years—the scholarship record of the school; the lower line represents the number of students considered; a zero in this line under any year indicates that the school had no representatives in the university that year in the freshman class. Asterisk (\*) before name of a school indicates boys' school; the dagger (†) indicates girls' school; the others are co-educational.

Name and Location of School	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Totals
Academy of California College, Oakland	..... (0)	..... (0)	2.76 (1)	2.00 (1)	1.98 (1)	..... (0)	1.92 (1)	2.97 (1)	..... (0)	..... (0)	..... (0)	5
Academy of Univ. of Pacific, Coll. Park.	..... (0)	..... (0)	..... (0)	..... (0)	..... (0)	..... (0)	2.28 (1)	2.45 (2)	..... (0)	..... (0)	2.85 (3)	6
Academy of Whittier College, Whittier	..... (0)	..... (0)	..... (0)	..... (0)	2.83 (1)	..... (0)	..... (0)	..... (0)	..... (0)	..... (0)	2.08 (2)	3
*Anderson's Academy, Irvington	3.43 (5)	3.20 (2)	3.49 (4)	3.67 (1)	2.24 (1)	3.45 (3)	3.31 (5)	3.49 (4)	3.03 (1)	2.35 (1)	..... (0)	27
*Belmont School, Belmont	3.45 (3)	3.33 (11)	3.43 (6)	3.34 (5)	2.73 (11)	2.51 (3)	2.90 (2)	3.08 (7)	2.42 (8)	2.82 (6)	3.12 (6)	68
*Berkeley Prep. School, Berkeley	..... (0)	..... (0)	..... (0)	..... (0)	3.19 (5)	3.14 (5)	..... (0)	2.51 (3)	2.56 (5)	3.49 (1)	3.31 (3)	22
*Boone's University School, Berkeley	2.98 (10)	2.99 (9)	3.01 (12)	2.87 (12)	3.19 (10)	2.78 (8)	2.72 (8)	3.43 (9)	3.31 (9)	3.21 (13)	3.12 (10)	110
Calif. Schl. of Mech. Arts, San Francisco	2.79 (10)	2.91 (10)	2.53 (8)	2.77 (10)	3.05 (25)	2.76 (12)	2.62 (13)	2.60 (25)	2.56 (16)	2.37 (12)	2.46 (21)	162



Name and Location of School	1901	1902	1903	1904	1905	1906	1907	1908	1909	1910	1911	Totals
†Miss Horton's School, Oakland	----- (0)	2.73 (1)	2.84 (2)	----- (0)	2.88 (3)	2.27 (3)	2.09 (2)	3.69 (1)	3.82 (1)	4.08 (1)	1.72 (1)	15
†Irving Institute, San Francisco	----- (0)	2.51 (2)	----- (0)	2.09 (2)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	2.33 (1)	3.33 (1)	6
†Marlborough School, Los Angeles	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	1.43 (1)	----- (0)	2.06 (1)	2
†Mills Seminary, Oakland	2.83 (2)	----- (0)	2.96 (2)	----- (0)	2.29 (1)	2.19 (1)	2.25 (1)	2.59 (1)	2.57 (4)	1.68 (2)	2.12 (8)	22
*Mt. Tamalpais Mil. Acad., San Rafael	2.68 (2)	3.22 (1)	2.62 (2)	----- (0)	----- (0)	2.19 (2)	2.66 (3)	2.83 (4)	2.00 (2)	2.96 (4)	2.64 (3)	23
†Notre Dame High School, San Jose	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	2.56 (1)	----- (0)	----- (0)	1
*Peralta Hall, Berkeley	3.59 (6)	3.50 (2)	----- (*)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	8
*Miss Ransom's and Miss Bridge's School, Piedmont	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	1.77 (2)	1.69 (2)	4
*St. Matthew's School, Burlingame	2.51 (1)	3.13 (3)	2.94 (2)	2.49 (1)	----- (0)	2.41 (4)	2.72 (4)	3.45 (1)	3.21 (2)	2.66 (4)	2.74 (4)	26
†St. Rose Academy, San Francisco	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	2.94 (1)	2.75 (1)	2
†Snell Seminary, Berkeley	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	2.00 (1)	2.64 (6)	3.25 (1)	2.59 (4)	2.31 (2)	14
*Thatcher School, Northoff	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	----- (0)	3.03 (1)	----- (0)	----- (0)	1





HASTINGS COLLEGE OF THE LAW

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SAN FRANCISCO, July 1, 1912.

*To the President of the University,*

SIR: I have to report that the affairs of Hastings College of the Law for the two college years of 1910-11 and 1911-12 have prospered, and that the college is in good condition both financially and as to teaching force. For 1910-11 there were 105 registrations and 21 graduations, and for 1911-12 there were 119 registrations and 29 graduations. The college work has been well done by the students, particularly the moot court work. Our lease of our present quarters has been renewed, the state providing the rent. These quarters could scarcely be improved on owing to the fact that we occupy the whole of the fourteenth floor of the building, with light and air on all four sides of it. We now have some library of our own and the San Francisco Law Library, to which our students have access, is within a few blocks of us.

Respectfully submitted,

EDWARD R. TAYLOR,

## UNIVERSITY INFIRMARY

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BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: I have the honor of presenting to you the following report concerning the University Infirmary for the academic years, 1910-12.

The statistics of the work of the university infirmary are to be found in the appendix. It is unnecessary to repeat them here. There remains the task of reiterating the purpose and policy of the infirmary, of showing to what degree this institution founded for the prevention of disease among students and the care of student health is meeting a need in the great body of university registrants, and of recording certain individual achievements among its staff of workers.

A word of explanation may be needed to interpret the significance of the statistics. They record a very large number of visits to the infirmary each year. This is not because student health is poor, but because we encourage students to come to the infirmary when they are even slightly ill, knowing that it is wiser to treat a disease in its incipency than to wait for possible grave complications. The most important lesson the infirmary teaches is prevention. The greatest good the infirmary can hope to do is to teach students the wisdom of early attention to illness. No case comes before the university physicians where occasion is not taken to point out how such an illness might have been avoided altogether, or how its serious consequences might have been minimized.

It is worthy of note that we have no basis of comparison for the infirmary statistics, since nowhere does there exist a similar

institution. To be sure other universities have infirmaries, but none of them have eliminated the participation for profit of the outside physician. Comparison can be made with the health statistics of communities, or with the data of armies and navies. But neither of these is satisfactory. The health conditions of an army or navy represent the health of a selected body of men, and would apply in no way to a body of men of whom less than 20 per cent would be physically fit for such service.

A second lesson which the infirmary teaches to students is the efficiency and economy of organized medical aid. Through organization a maximum of medical service is rendered for the minimum of expenditure. Our American public are sadly ignorant of the laws of health protection, but the students who pass out of the university may be the leaven that shall leaven the whole lump. Certainly when people realize that most diseases can be prevented, they are going to organize in such a way that they may obtain the services of a physician without the repeated payment of fees. Already arguments are being raised against the possible organization of the people for medical service, because some few such organizations, made for mercenary reasons by unscrupulous laymen and physicians of questionable training, have resulted in a deserved failure. Nevertheless, coöperation is the only feasible method by which people of ordinary means can have the advice of the best physicians. That fees are high is true; that they cannot be much lower is also true. The requirement for the training of a physician in both time and money is steadily increasing. Adequate reimbursement is only just. Because these things are unavoidable, people will have to resort to some form of coöperation, whereby a per capita tax will cover the main expenses, as in the university infirmary.

A third lesson which the infirmary teaches, unconsciously but effectively, is democracy. According to an unwritten law, all students, upper or lower classmen, rich or poor, receive identical treatment. The best is done for every student; there are no special privileges to be purchased. If a student occupies a single room, it means that his case requires segregation, not, as at Harvard, Princeton, or Cornell, that he has paid for exclusive quar-

ters. As far as those in authority can judge, this arrangement has never been criticized by the student. Indeed it seems that the infirmary fosters among the students who resort thither a sense of fellowship and mutual understanding.

A statement should be made of the fact that since the publication of the health requirements for admission to the university there have been few applicants who have proved physically unfit to pursue regular college work. During the past two years only seven have been refused admission on these grounds. Of this number, four have since died of tuberculosis and one is in an institution for the insane.

In the medical examination of matriculants, Dr. T. C. Burnett has made the eye examinations, and Dr. H. B. Graham the examination of ear, nose, and throat. These specialists have notably aided many students by discovering serious defects and indicating the need and method of relief. Students have been uniformly grateful for the information given them. The infirmary owes a debt of gratitude to Dr. Burnett and Dr. Graham, whose services were without remuneration.

During the medical examinations Dr. E. S. Kilgore made special observations on blood pressure, recording the difference as the student stood and as he reclined; and recording the variation in reading and the blood pressure, brought about by lack of promptness in reading. Dr. Kilgore measured also the tonicity of the hamstring muscles, in order to establish a standard for normal adults and to determine the normal variation. These statistics and Dr. Kilgore's comments thereon will be added to and published later.

During the examinations also, Miss Cunningham made observations and measurements in the variation of form and position of the shoulder blade. It has been stated that the form of shoulder blade known as "scaphoid scapula" was associated with degeneracy and syphilis. Miss Cunningham found it present in a large number of normal individuals. Comparing these results with her statistics based on the inmates of the state hospital for defectives at Sonoma, she has virtually disproved the significance of "scaphoid scapula." Miss Cunningham was granted the de-



gree of master of science on a thesis of which these observations were the material.

Dr. John N. Force and Dr. Romilda Paroni have rendered efficient assistance in the infirmary.

A report of the work of the infirmary would be incomplete without reference to the superintendent, Miss Ethel Sherman. To her self-sacrificing devotion is due in large measure the admirable ordering of the large household, and the carrying to successful completion of the varying undertakings of the university physician and his assistants.

At the beginning of the session of 1911-12, a new record system was installed at the infirmary to conform to the "international classification of diseases," thus making our records available for the whole scientific world.

As an institution responsible for the health of some four thousand people, the infirmary has not adequate space, either for perfectly efficient dispensary service or for hospital accommodations.

In the dispensary the need most apparent to a visitor is that of a larger waiting room, the present one being in a state of chronic congestion. The office room is sadly inadequate, the assistants sharing the office of the university physician. The office rooms have to be used also for filing rooms, a fact which crowds the offices and results in a far from ideal method of disposing of record. An X-ray room is imperative, as is also a supply room, while two or three more treatment rooms would facilitate the care of the large numbers of patients frequenting the dispensary.

There are often more bed patients than there are rooms or beds for their accommodation. The short stay of most patients requires a constant preparation of rooms before another patient can be admitted. Occasionally it is desirable that a student sick with a given disease should be alone in a room, or in a room where a student with the same difficulty is being cared for. At present when the infirmary is coping with a variety of diseases it may be crowded to its full capacity with but fourteen inmates. Such has been the case several times during the past two years. It was rare good fortune that gave the university such fine weather



during its last weeks of the session just passed. So many students were affected with mumps that a large tent had to be used for their reception. Had the epidemic occurred in bad weather it is not pleasant to think what would have been the consequences. The position of the infirmary is made more difficult by the fact that no hospital on this side of the bay will admit patients suffering from an infectious disease. The university cannot shirk a responsibility in the face of such a fact.

G. F. REINHARDT,  
University Physician.

## UNIVERSITY LIBRARY

BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: We have the honor to submit the following report on the progress of the University Library during the past two years.

The accessions of books (in charge of Misses Burt and Mecum) were as follows:

By purchase:	1910-11,	1911-12
Adams fund .....	.....	17
Beleher fund .....	11	.....
Class funds (various) .....	.....	6
Denicke fund .....	6	216
General fund .....	5,248	9,741
Hallidie fund .....	17	1
Jucksch fund .....	8	18
Knights of St. Patrick fund .....	2	25
Meyer fund .....	.....	29
Moffitt fund .....	334	533
Reese fund .....	1,646	1,130
Sather fund .....	107	161
Spreckels fund .....	187	161
By binding of periodicals .....	1,623	2,591
For departments .....	689	997
Crocker fund .....	63	152
Thorsen fund (anatomy) .....	8	43
	9,949	15,821

## By gift:

Main library .....	2,235		6,300
History I class .....			543
Mary Lake fund .....			80
Replacements .....	8		1
Weinhold library .....	198		7
To departments .....	174	2,615	69 7,000
<hr/>			
By exchange .....		1,550	3,340
<hr/>			
Total volumes received .....	14,114		26,161
Total volumes in library .....	212,345		238,506

## Mr. Bumstead reports:

## Current periodicals

By purchase .....	1,014		1,086
By exchange .....			2,317
By gift .....	4,025	5,039	2,005 5,408
<hr/>			
Unbound pamphlets .....		11,688	7,820

A real flood of books has poured in upon us, and the fact that all of them have been properly cared for testifies to the efficiency of the catalogue department. The accessions in 1911-12 have set a high water-mark, exceeding by 9664 volumes the number received in any previous year of our history. Limitation of space in this report prevents mention of any but the most important receipts, but we should call notice to the following sets of periodicals which arrived in

1910-11:—*Annales des sciences naturelles*, *Archäologische Zeitung*, *Archiv für anthropologie*, *Argentine Republic*, *Estadistica anuario*, *Berlin*. *Geodätisches institut*, *Bibliotheca arabico-hispana*, *Bonner jahrbücher*, *Brain*, *Bulletin scientifique du nord de la France*, *Gardener's chronicle*, *Ibis*, *Journal für chemie und physik*, *Zeitschrift für exakte philosophie*.

1911-12:—*Annales de la science agronomique*, *Archiv für naturphilosophie*, *L'Arte*, *Asiatic quarterly*, *Bordeaux faculté des lettres annales*, *Chemiker-Zeitung*, *Cours publics d'architecture*, *Michigan pioneer and historical society*, *Naples*. *Accademia della science fisiche*, *Ossianic society*,

Rivista di filologia, Sociedad de bibliófilos andaluces, Stahl und eisen, Virchow's Archiv für pathologische anatomie, Zeitschrift für hygiene, Zoological society of London.

Among the valuable monographic works we may cite the following titles:

1910-11:—Bandello's *Histoires tragiques*. 1603-4; Bronn's *Klasse des tierreichs*; Duflot de Mofras, *Mélanges*; Gerhard's *Griechische vasenbilder*; Graefe-Saemisch's *Handbuch der augenheilkunde*; Maek's *Cyclopedia of law*; Mueller's *Fragmenta phytographiae Australiae*; *Voyage de La Bonite*.

1911-12:—Stevens' facsimiles of manuscripts in European archives; the *Ellésmere Chaucer* in facsimile; Berlese's *Icones fungorum*; Cooke's *Illustrations of British fungi*; Dalrymple's *Spanish pretentions*; Macgibbon's *Architecture of Scotland*; *Matériaux pour l'histoire de l'homme*; Sir Isaac Newton's opera; Rymer's *Foedera*; Hallesche *Winckelmanns-programme*.

The University Press has continued to secure further exchanges of significant value in the work of the university.

*Book Gifts.*—Among the gifts of books during 1910-11 may be mentioned the valuable set of the *Registro nacional de la Republica Argentina* presented by Professor Bernard Moses, and the 164 volume set of the *Archiv für pathologische Anatomie und Physiologie* transferred from the medical department in San Francisco.

Upon the occupancy of new and enlarged quarters in 1911 the library became the recipient of many gifts, chief among which are the following:

From General Charles R. Greenleaf, shortly before his lamented decease, we received 206 volumes, mostly medical; immediately followed by a similar collection from Dr. C. H. Rosenthal.

By bequest of John Abernathy Brewer, '03, his law books (134 volumes) were added to the Boalt Hall library.

From Mrs. Phoebe A. Hearst were received a considerable number of manuscripts, oriental and occidental, of various dates, of exceeding interest to the booklover. Most of them are beautiful specimens on vellum of the calligrapher's art, adorned with miniatures, initials, etc., in burnished gold and colors. Mrs. Hearst also favored the library with

quite a number of printed books, in first or rare editions. About one half of the collection is in early or contemporary bindings, the other half is resplendent in modern covers artistically decorated by some of the best bibliopegists of the 18th and 19th centuries.

From the late Mrs. Magdalena Nuttall (of England) came a collection of books on lace, which included some rare and costly items.

From Mr. J. C. Cebrian were received about 900 volumes relating to Spanish philology, literature and fine art. Among these were sets of the *Biblioſilos eſpaſoles*, *Libros raros*, *Nueva bibliotheca de autores eſpaſoles*, and of periodicals which filled several series partly contained in our library. Included in this important gift were the splendid *Monumentos arquitectonicos*, Owen Jones' *Alhambra*, and the first Spanish translation of Dante (1515).

A Tibetan manuscript—title and subject as yet unknown—was presented by Mr. H. J. Openshaw.

Mrs. de Fremery, widow of James L. de Fremery, '82, gave over 500 volumes mostly relating to Dutch general and local history, many of them beautifully illustrated by 17th and early 18th century engravers.

*Money and Miscellaneous Gifts.*—In 1910–11 gifts of money were made by Eugene Meyer, Jr., of New York, \$2000 for history; by James K. Moffitt, \$1000 for literature, history and philosophy; by Mrs. William H. Crocker, \$1000 for physiology and pathology; by the Knights of St. Patrick of San Francisco, \$100 for Gaelic; by "a former graduate," \$50 for the Latin department collection; by Mrs. Ida Denicke, \$40 for German literature; and from W. R. Thorsen, \$50 for anatomy.

In 1911–12 Mrs. Ida Denicke added \$1000 to the fund established by the late Regent E. A. Denicke; another regent by the gift of \$500 started an "alumnus book fund"; and the Class of 1887 gave \$350 as the beginning of its class fund for the purchase of books.

In response to request, sixteen latest official maps of counties in California have been presented by the respective boards of supervisors.

A portrait in oil of Lieut. George H. Derby ("John Phoenix") was presented (Oct., 1910), by Mrs. Lily Hitchcock Coit. The humorist inscribed on the back of the frame "Presented to Dr. C. M. Hitchcock by the unfortunate subject."

Mrs. Sather presented her portrait (Sept., 1910), one of the latest productions by William Keith.

Mrs. Kate T. Cousins gave (July, 1910), a painting of the Golden Gate by the California artist, G. J. Denny.



An interesting series of 105 autograph letters addressed to Justice Stephen J. Field was donated by Mrs. George E. Whitney.

Medals have been received from the Numismatic and Antiquarian Society of Philadelphia, and the universities of Berlin and Montevideo; also from the U. S. Treasury department came 141 Confederate notes of various denominations.

The entire coin and medal collection, including the valuable lot presented by Mrs. Hearst to the department of anthropology has been installed in a special coin case. The ancient coins are in process of cataloguing by Professor O. M. Washburn.

*Inter-library Loans.*—The principle of inter-library loans is now generally approved and adopted by almost every American library. Cost of transportation by either mail or express has impeded its fuller utilization, but with the passage of a satisfactory parcels-post act by congress this means of helpfulness will be very greatly developed. In 1910-11 we loaned 73 times (209 volumes), and borrowed 26 times (80 volumes); in 1911-12 we made 77 loans (140 volumes), and borrowed 27 times (92 volumes). This count does not include departments of our own university located away from Berkeley.

*Changes in the Staff.*—In anticipation of large extension of library work involved in the near occupancy of the Doe building several new appointments to the staff were made July 1, 1910, namely: Harold L. Leupp, associate librarian, Sarah S. Oddie, Winifred H. Bigley (vice Miss Anderson), Marie Tollefson, and William H. Gwynn with Frances Mecum on half time (vice Miss Greene).

Further appointments followed later in the year: Alice I. Lyser (Dec. 1, 1910), Edna L. Goss (Apr. 15, 1911), John A. Dean and Carleton B. Joeckel, assistant reference librarian (June 1, 1911).

Resignations were accepted from Elizabeth M. Haskell (Mar. 31, 1911), Helen G. Sheldon (May 10, 1911), and R. C. Woodmansee (June 30, 1911). Mr. Woodmansee had rendered very efficient service for six years.

In 1911-12 appointments were made of Edith M. Coulter, senior assistant, Myrtle I. Roberts, librarian's secretary, Coral Wolfe, junior assistant, and Thomas G. Clark, messenger (all July 1, 1911).

Later were appointed Sydney B. Mitchell, head of accessions department (Aug. 1, 1911, vice Arthur B. Smith, resigned Aug. 31, 1911), Ella K. Walker, senior assistant (Aug. 1, 1911), and Sarah S. Oddie (Sept. 11, 1911). Miss Oddie had temporarily left library work Nov. 30, 1910.

Resignations of Miss Bigley (July 1, 1911), and of Miss Louise W. Katz (June 30, 1912) were accepted.

*Moving of the Library.*—On February 6 and 7, 1911, the law library was transferred from Bacon Hall to Boalt Hall, and between May 29 and June 8 the main collection, numbering about 220,000 volumes, together with a considerable part of the furniture, was moved to its present quarters. This move was planned and carried through by the library staff, as described in the Library Journal for September, 1911. Advantage was taken of the interval before the opening of the summer session to inventory the books and to change completely the loan records to a double-entry system modeled on the Cornell University plan. The old records, containing entries dating back as far as 1896, were carefully checked up and all books appearing on them were either called in, renewed, or recorded as lost. The loan records now represent, probably, as nearly accurate a record of all books not in their places on the shelves as it is possible to obtain. The total loss of books since the last complete inventory taken in 1908, was shown to be about 1200 volumes. The policy of restricting stack privileges to members of the faculty and duly qualified students, together with the elimination of errors from the loan records, should greatly reduce the volume of losses, although the practice of placing reserved books in the reading room has introduced a new factor into the problem. These books, to the number of several thousand, representing the reading required or recommended in connection with class work, are at the beginning of each term placed on open shelves in the reading room for the convenience of the students. They may be consulted without formality while the library is open, and, under proper restrictions, may be drawn for home use when the library is closed. In spite of this rather liberal provision for student needs, 50 volumes

were taken from the reading room during the second semester of 1911-12.

The Doe memorial building was opened to the public on June 26, 1911, the beginning of the summer session. A trying period followed, lasting until Christmas. Delays in the completion of contracts kept the building full of workmen, furniture and fittings arrived but slowly, the new administrative machinery had not yet begun to work smoothly, and the staff was wholly inexperienced in the multifarious new duties imposed by the new building. Continual and intelligent effort gradually brought order out of chaos, and at the same time revealed many weaknesses in methods and equipment which, however well adapted to the old building, could by no means stand the strain imposed by the very different conditions obtaining in the new. From the standpoint of service to readers, the greatest weaknesses have proved to be the catalogue and the method of book-numbering. The exclusion of undergraduate students from the stack has greatly increased the use of the catalogue, and the students appear to find the classified arrangement of subjects difficult to master. The time of the attendants in the reference department is largely devoted to assisting students in the use of the catalogue—a duty of the first importance while necessary, but one which ought not to be necessary. Errors and insufficiencies in the catalogue increase the difficulty. Behind the loan desk errors and delays are of constant occurrence because the attendants have trouble with the call-numbers. All of this increases administrative cost. A wholly new catalogue on the dictionary principle is the most crying need of the library today, and for the reasons set forth below, the collection should be reclassified at the same time it is recatalogued.

*Catalogue Department.*—The plan proposed for recataloguing involves the adoption of the systems of classification and of subject headings in use at the Library at Congress. Printed cards with classification number and heading already assigned could then be procured for a large proportion of the books, thus greatly lessening the cost and difficulty of the undertaking. The University of Chicago Library, now in process of reorganization,

has adopted this plan, and will print cards on the Library of Congress model. To carry it through to good advantage, however, will require the services of an expert in Library of Congress methods, who should be put in charge of the work and given a free hand in working out his problem along the prescribed lines, making what dispositions seem best of the assistants at his disposal. To facilitate matters in this respect the cataloguers now on the library staff have been classified temporarily as readers and helpers, a recommendation to this effect having been made in the belief that recataloguing might begin in the summer of 1912. If the library continues to grow at its present rate of 30,000 volumes per year, delay in recataloguing will mean a rapid increase in the amount of work done twice. Accessions are now given the briefest possible author and subject entries, without analytics except when obtainable in printed card form. This is a temporary expedient, intended to minimize duplication of work; and while serving after a fashion the immediate needs of readers, does not increase the value of the catalogue as a bibliographical tool. It is believed that the recataloguing plan which it is proposed to adopt will provide an adequate and satisfactory catalogue in record time and at a minimum expense, and with the least possible interruption to class work. The new classification provides a broad basis for the rapidly growing collection, while the remodeling of methods on those of the Library of Congress insures a constantly increasing proportion of work ready done in Washington or Chicago. A minor feature of the plan, which is nevertheless of interest, is the provision for supplying each department desiring it with a catalogue of that portion of the library with which it is concerned.

Work on the depository catalogue began in July, 1911, and is complete as far as the cards for it have been received. This catalogue includes all titles printed by the Library of Congress since the beginning of 1903; about 55,000 titles printed by the John Crerar Library; all titles so far printed by the Harvard University Library; and copies of all cards for German dissertations printed by the Royal Library in Berlin since August, 1909. In the coming year there will be added, in addition to



continuations of the series mentioned, the titles printed by the Library of Congress from 1898 to 1902 inclusive; about 25,000 additional titles from the John Crerar Library; the titles to be printed by the University of Chicago Library; and all titles printed by the Royal Library in Berlin, except those in Oriental languages, from the beginning of 1912. Eventually these will all be combined in one alphabet with the necessary cross-references, forming a bibliographical tool of the highest value.

*Accessions Department.*—Fundamental changes in the methods of the order department had become necessary. The opportunity to put these changes into effect came with the reorganization of the department under the new title of accessions department, following the resignation of Mr. Smith and the appointment of Mr. Mitchell. The accessions record, formerly maintained by the catalogue department, was transferred and simplified by the substitution of the order card for the accession book, thus doing away with one unnecessary record. The accounting system, cumbersome through the multiplicity of funds and allotments, amounting still to more than 100 separate accounts, was simplified and systematized in the following manner. Every written order was restricted to one fund: that is, no order sheet carried items from more than one fund. Duplication of these sheets thus provided a record by funds in addition to the main record under order number. A change of greater importance was made in the provision for caring for old outstanding orders. The system under which unused departmental allotments lapse at the end of the fiscal year has always been a cause of trouble to the library, owing to the fact that a large proportion of book orders cannot be filled in the same fiscal year in which they are placed; many of them, in fact, standing for years before it is possible to fill them. Accordingly the practice grew up of ignoring the unfilled orders outstanding at the end of a fiscal year, on the theory that if any of them were filled in the course of the new year, there would probably be sufficient funds available somewhere to take them up; and that by "juggling" the accounts and shifting balances between the various allotments and carrying forward overruns which could not be adjusted in this manner, a passable



showing might be made at the end of the year. This was a rough and ready way of dealing with a bad situation and worked fairly well in practice for a number of years; but as the outstanding orders were allowed to accumulate to the extent of several thousand dollars, there was always danger that the library would some day be faced with heavy bills it was not prepared to meet. Moreover, the system was unfair to certain departments purchasing in fields in which books are not readily obtainable; through the plan of shifting balances such departments regularly contributed to the support of other departments whose books were more easily obtainable. To remedy this situation the outstanding order file was carefully revised before the departmental allotments were made in the fall of 1911, and outstanding orders of date earlier than July 1, 1910, amounting to several thousand dollars, were cancelled. The value of the remaining orders was computed and divided by departments, constituting a first lien on the departmental allotments for the year. To this was added the cost of continuations which might be expected to arrive in the course of the year—another item of expense previously ignored and of which no separate record had previously been kept. As the total amounted to more than \$4600 there resulted a sweeping reduction in departmental means during the year 1911-12, and consequent vigorous protests on the part of members of the faculty who felt the pinch without understanding the cause. The result justified this temporary hardship, which ended with the fiscal year; and if the university will make provision for carrying over the close of each fiscal year all unexpended book fund balances against which orders are actually standing, this long-continued difficulty will be settled satisfactorily. The provision by which the library, at the close of each fiscal year, will cancel all unfilled orders which have been outstanding for 30 months, will prevent the undue accumulation of back orders.

*Periodical Department.*—Owing to insufficient assistance in previous years, the periodical records were in very bad condition and far from complete. They have been entirely worked over and brought up to date, and within a short time the library plans to publish a complete list of the serials on its shelves, including

those which have ceased publication as well as those received currently. It is intended to use this list as the basis of a new edition of the Coöperative List of Periodical Literature in Libraries of Central California, the 1902 edition of which is long out of date. In connection with the reorganization of the periodical records, entries were made in the main catalogue for all series received, whether by purchase, exchange or gift; this task is about two-thirds completed. The working over of the mass of unbound material, mainly in foreign languages, received in past years by exchange is nearly finished; the more valuable material is being bound and catalogued, and the balance entered in the pamphlet collection. This is proving a heavy drain on the binding appropriation, which is scaled to current needs and is not sufficiently ample to care for so large a body of arrears. An increase of \$1000 per year for three years could be used here to good advantage.

It is greatly to be regretted that the plan agreed upon by the library and the editorial committee, by which the library was to take over from the university press the handling of exchanges, could not be carried out this year. The plan involved the appointment of a bibliographer who should devote his entire time to systematically building up the library along the lines of national, state and municipal publications, American and foreign; the publications of scientific and learned societies, etc.; using for the purpose the resources of the university press and the great accumulation of duplicates belonging to the library. Much of this material is of the highest importance, easily obtainable while new, but owing to the conditions of its publication, very difficult or impossible to procure at a later date. A large part of the field is virgin as far as this library is concerned, although its distance from the great eastern centers and its position of primacy among the libraries of the western United States impose upon it an obligation, which should certainly be met, of completeness in certain fields outside the range of smaller institutions. In the belief that this library would shortly undertake the systematic collection of documents, the resources of one of the best collections and the experience of one of the most successful collectors

in this country have been placed at its disposal. The opportunity is an unusual one and should not be allowed to pass.

*Shelf Department.*—The numerous seminar rooms in the new building and the establishment of the reserve collection in the reading room have greatly increased the work of the shelf department. The process of shelving books in the main stack alone reaches an average of 18,000 volumes per month through the college year and of 15,000 per month through the summer session. A system of continuous inventories has been inaugurated, under which the entire collection, including the departmental deposits, is checked at least once a year, while the more frequently used classes are covered more frequently. The reading room collection is checked once a month; the seminar rooms are covered every two weeks. This minimizes the difficulty arising from the misshelving of books, and ensures the prompt detection of losses. As this work involved the completion of the shelf-list, a vigorous campaign was inaugurated in January, 1912, with the assistance of the catalogue department. A shelf-list had been started four years ago, but owing to pressure of other work, had fallen badly in arrears. It is now more than two-thirds completed. In this connection, the assignment of book-numbers in classes in which the books had not been differentiated heretofore has greatly reduced the work of the desk attendants. At the moving of the library Class 426 (Geology), for instance, contained several thousand volumes all bearing the Class-number 426, without further differentiation. The task imposed upon the attendants by this condition after the closing of the stack may be imagined.

*Salaries and Promotions.*—The questions of salary and promotion are, of course, vital to any staff, and the adoption of a fair and reasonable policy in these respects goes far to establish the administration on a basis of confidence and right feeling. A satisfactory policy should provide compensation which increases gradually with length of service, but offers special reward for unusual merit. Appointment under the terms of an established schedule of this nature offers some compensation for the absurdly low salaries of the library profession. The schedule which it is desired to place in operation in this library is given below, the

annual increase within each grade to be automatic, and promotion from any grade to the next higher to be for merit:

Grade	Salary	Annual increase
Attendant .....	\$30.00 to \$50.00 per month.	\$60.00
Junior assistant .....	\$50.00 to \$75.00 per month.	60.00
Senior assistant .....	\$960.00—\$1,500 per year.	60.00
Head of department.....	\$1,500.00 per year up.	100.00

The adoption of this schedule would not necessarily mean that a particularly well qualified appointee would be required to enter at the lowest salary for his grade, although after appointment his advancement would be in accordance with the schedule.

*Library School.*—A course in library methods was inaugurated in connection with the summer session of 1912, and is now drawing to a close. Miss Faith E. Smith, a graduate of the New York State Library School at Albany and now director of the Chicago Public Library training school, is carrying on the work with the assistance of Miss Edith M. Coulter, Sydney B. Mitchell and Frank M. Bumstead of the university library staff. Circulars announcing the proposed course were sent to all libraries and high schools in California, and the response was instantaneous. More than one hundred applications were received before the end of May. Twenty-five of the applicants were admitted, all of them either engaged in library work or under appointment to library positions, and several members of the university library staff took advantage of the opportunity and enrolled for one or more subjects. The course was planned to render practical assistance to librarians by offering a thorough grounding in the fundamentals of library technique; and seems to be giving general satisfaction. At all events, it has demonstrated, if any demonstration were needed, the importance of a course in library training accessible to dwellers on the Pacific coast. There is no library school west of the Mississippi river, and there is no western locality in which such a school could be established as advantageously as at Berkeley, under the auspices of the University of California. The library administration is now at work on the details of a plan for the establishment of



such a school, and will present its recommendations in the fall.

*Relations with Students and Faculty.*—With the opening of the new building the system of fines for late return of books in the circulating collection was abolished. It was felt that if this matter were properly presented to the students the difficulty would be minimized. Accordingly the situation and the aims of the library administration were brought before the students through their officers and by articles in the *Daily Californian*. The result so far has not been satisfactory; a large proportion of the books drawn for home use is not returned on time, the checking of the records involves hours of work each week, and the single item of postage on recall notices amounts to several dollars monthly. However, conditions early in the year were such that the system can hardly be said to have had a fair trial, and judgment should be suspended for at least another six months. Last April, acting upon the suggestion of the student's welfare committee, the policy was adopted of issuing reserved books for home use over night or over a holiday, on condition that they be returned by a certain hour the following day under penalty of a fine of considerable size. This plan has worked well, and perhaps indicates the line to be followed if it becomes necessary to return to the old system of fines for late return of books from the circulating collection.

Considerable progress has been made in the direction of building up a permanent reading room collection, which may be consulted without formality but which does not circulate. This collection will eventually contain several thousand volumes, particularly suited to undergraduate needs. Two sections of the reading room shelving have been reserved for the display of new books, and since last January all new books as they leave the catalogue department are placed on these shelves for one week, for public inspection.

The policy of the library with regard to open hours has been shaped by the demand evidenced during the past year. The hours now are 8:00 a. m. to 10:00 p. m. Monday to Saturday inclusive, during term time and including the summer session. The open hours on Sunday are 10:00 a. m. to 4.00 p. m. In vaca-



tion the hours are: 9:00 a. m. to 5:00 p. m. Monday to Friday inclusive, and 9:00 a. m. to 12:00 m. Saturday; on Sunday during vacation the library is closed. The library will be open on full schedule hereafter during those legal holidays falling in term time; on other legal holidays it will be closed.

The question of the relation of the library to the scientific and technical departments is pressing for solution, and will receive careful consideration in the fall with a view to the adoption of a satisfactory working policy. The needs of these departments for books to be used in connection with the laboratory or the workshop are entirely legitimate and should be met; there are, however, certain difficulties to be surmounted which will necessitate conference and compromise. Conflicting needs must be adjusted; proper supervision and protection must be ensured; the rights of members of other departments and of undergraduate students must be guarded. A beginning was made by the promulgation of certain regulations governing departmental collections, approved by the President February 20, 1911; but the question proved too involved to be settled hastily, and pressure of work preceeding and following the moving of the library postponed its further consideration. The adoption and operation of a policy in this matter forms an important part of the programme for the coming year.

The question of the loss of books is discussed above, under the caption "Moving of the library."

*The New Building.*—The experience of the past year has shown the new building to be eminently satisfactory in most respects. Some additional seminar rooms of the large size are needed, for the accommodation of departments which are uncomfortably crowded in the smaller rooms; while increase in the staff and readjustment of work necessitates enlargement and rearrangement of the administrative offices. This latter need will become imperative when the work of recataloguing starts, and from six to ten persons are added to the sixteen now occupying rooms originally designed to accommodate eight. The enclosure of a space 30 ft. by 43 ft. 6 inches, immediately south of the present offices on the main floor, and some rearrangement of par-

titions, would provide for the needs of the staff for an indefinite future period. The rearrangement of partitions would facilitate the work of the staff and would permit of adequate supervision, which is impossible at present. A plan of the proposed changes is now on file in the library. All displaced doors, windows, bookcases, etc., would be utilized in the addition, materially reducing the cost of construction.

*Dedication of the Doe Building.*—Charter Day, March 23, 1912, was specifically given to the formal dedication of the new library. A scholarly oration—"The Quick in the 'Dead' " was delivered before a large audience in the Greek Theater by Dr. Herbert Putnam, librarian of Congress.\* The assembly then adjourned to the library, where, in front of the main entrance, brief dedicatory addresses were made by Librarian Rowell, Dr. Putnam, Mr. Loring B. Doe and President Wheeler.

In the evening an informal reception was attended by several thousand friends, officers and students who enjoyed the opportunity of examining in detail every part of the edifice with fullest freedom.

Respectfully submitted,

J. C. ROWELL,  
Librarian.

HAROLD L. LEUPP,  
Associate Librarian.

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\* Dr. Putnam's address was printed in the April, 1912, number of the University of California Chronicle; the dedicatory addresses, together with a description of the Doe building by Professor John Galen Howard, the architect, and a history of the library by the Librarian, appeared in the July number.

## LICK ASTRONOMICAL DEPARTMENT

(LICK OBSERVATORY)

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MOUNT HAMILTON, July '1, 1912.*To the President of the University,*

SIR: I have the honor to submit herewith my sixth biennial report, covering the period July 1, 1910, to July 1, 1912.

The financial difficulties connected with the publication of the more extensive investigations completed by members of our staff have been serious during the past six years, and many of them still exist.

The results secured by the D. O. Mills Expedition to the Southern Hemisphere during its first period, 1903-06, which were ready for publication in June, 1908, went to press late in 1910, thanks to a private gift from Mrs. Hearst for this purpose. The printing was completed and the publication was distributed to our correspondents late in 1911. A share of the expense, not covered by the gift, was defrayed by drawing upon the current maintenance funds of the Observatory.

Dr. Perrine's determination of the solar parallax, as derived from the photographs of Eros taken with the Crossley Reflector in 1900, was described in my last report. The results were published in volume form by the Carnegie Institution of Washington in 1911.

It was decided in 1902 to print contributions from the Berkeley Astronomical Department in the publications of the Lick Observatory. Parts 1, 2, and 3 of Volume VII, Publications of the Lick Observatory, containing papers by Professor Leuschner, were printed in 1902. Other parts of the volume were printed several years ago. Lack of funds delayed the comple-

tion of the volume, but, on the basis of an appropriation made by the Legislature of 1911, the concluding parts are going through the press. None of the parts were distributed to our correspondents, as there was always the hope that funds would be available to complete the work. Thus the uncertainty and the financial inability have caused the printing of the volume to be distributed over a decade.

The reproductions of Professor Barnard's photographs of the Milky Way and comets, obtained on Mount Hamilton prior to his resignation in 1895, have made good progress in the biennial period. Altogether 100 plates have been reproduced, and 1200 copies have been printed from each plate. Funds collected by Professor Barnard from generous friends in California have been sufficient to provide for 94 sets of plates. The cost of the remaining 6 sets, of printing the text to accompany the illustrations, and of binding and distributing the volume must be met from some other source of funds.

Dr. Curtis's series of photographs of Halley's comet, covering the period September 12, 1909, to May 27, 1911, consists of 390 negatives, nearly all of which are of great excellence. Through the courtesy of astronomers in other institutions, in sending sets of their photographs to supplement ours, we now possess nearly 700 photographs of Halley's comet, which afford material for a fairly complete history of the comet, during the 1909-11 apparition. The measurements and calculations necessary to prepare this observational material for discussion and publication are well advanced. Mr. Wright obtained an extensive series of spectrograms of the comet, together with a number of visual observations of its spectrum. The visual and photographic spectra have been studied, and the results in manuscript form are ready for publication. On account of the importance of the subject and of the interest with which our results will be examined when Halley's comet is due to return seventy-five years from now, it is desirable that fully 100 photographs of the comet and its spectrum should be published, in a Halley's comet volume. The cost of the illustrations, exclusive of the text, will approximate \$800.



It has not been possible to begin the publication of a proposed volume to contain the *detailed* results of the Phoebe A. Hearst Eclipse Expedition to Chile (1893), of the Charles F. Crocker Eclipse Expedition to India (1898), of the William H. Crocker Eclipse Expeditions to Georgia (1900), to Sumatra (1901), to Spain and Egypt (1905), and to Flint Island (1908), because funds have not been available for reproducing the unique and extensive series of photographs secured on these occasions. The cost of the illustrations, exclusive of the text, will approximate \$2500. To avoid misunderstanding, it should be said that the *general* results of these expeditions were published promptly. The principal results are briefly described in the former biennial reports.

Available funds have not justified plans for the detailed publication of the radial velocities of stars observed at Mount Hamilton with the Mills spectrograph and at Santiago since 1906, by the D. O. Mills Expedition. The proper presentation of these results would demand the capacity of several quarto volumes. In view of prevailing uncertainties it has seemed best to publish the average radial velocities of the individual stars, by spectral classes, in the form of Bulletins. The velocities of 225 Class B stars, including a few observed at other institutions, were published in Lick Observatory Bulletin 195. The velocities of 212 Class A stars have just appeared in Bulletin 211. The results for 190 Class F stars are in press. The detailed results for 150 stars observed by the D. O. Mills Expedition prior to 1906 were published, as explained above, in 1911. Our radial velocities of 100 stars whose proper motions are large have just been published in Bulletin 214. The results for about 100 stars whose velocities are variable were published in 1910 and 1911. Including the Class F velocities, in press, we shall have published during the biennial period the radial velocities of nearly 1000 stars. The Class G average velocities are substantially ready for printing. It is planned to publish our Class K and Class M average velocities within the next few months. As one result of these preliminary publications, astronomers will have the radial velocities of approximately 1500 stars as a partial basis for their studies of the stellar system.



Dr. Aitken has the manuscript well advanced for a quarto volume to contain the observations and studies of the more interesting visual double stars which he has made during the past decade.

It is apparent from the foregoing paragraphs that serious efforts should be made to secure a satisfactory solution of our publication problems. As there have been several years, both before 1906 and since 1906, when absolutely no funds were available in the State Printing Office, it is hoped that the next Legislature will make a greatly increased appropriation, in order that the arrears of printing may be removed.

The number of Lick Observatory Bulletins issued to date is 215, extending into Volume VII. Six short Bulletins were published for the Berkeley Astronomical Department.

The seismographic instruments generously provided by the Honorable William R. Hearst were installed early in the year 1911, in a specially constructed concrete and steel room in the basement of the meridian house. The equipment consists of a 200-kilogram Wiechert Horizontal seismograph and an 80-kilogram Wiechert Vertical seismograph. The seismographs had been carefully adjusted and in commission only a short time when they were injured by the severe earthquake of July 1, 1911. They were put in order again as promptly as possible, and during the past year they have recorded a large number of shocks, probably in the vicinity of 200, in a thoroughly satisfactory manner. The records have been forwarded each month to the Geological Department of the University for study. Some of the results of these studies have been published in the Bulletin of the Seismological Society of America.

The resources of the Observatory and the opportunities for students of astronomy have been increased by the founding of the Martin Kellogg Fellowship, for which the late Mrs. Louise W. B. Kellogg, widow of ex-President Martin Kellogg, left an endowment fund amounting to \$20,000. The purpose of the Martin Kellogg Fellowship is to provide opportunities for advanced instruction and for research to students who have already received the degree of Doctor of Philosophy, or to mem-

bers of the staffs of observatories. Preference will be given to qualified applicants who may desire to pursue studies or researches in the Lick Astronomical Department, or in the Lick and Berkeley Astronomical Departments, and to members of the Lick Astronomical Department who may desire to undertake work in another university or observatory; but it is possible that opportunities will arise to award this fellowship, in cases of special merit, without restrictions as to the places of residence of applicants and holders. The stipend per annum is variable in amount, and is aimed to cover the necessary expenses of travel and residence.

The first holder of the Martin Kellogg Fellowship is Dr. Keivin Burns, who served five years as Carnegie Institution Assistant in the Lick Observatory. Dr. Burns has been engaged in study and research in Bonn University during the entire academic year 1911-12, and it is to the advantage of the researches which he is conducting that he remain at Bonn during the first semester of next year. His principal work has consisted in determining with extreme accuracy the wave lengths of the lines in the arc spectrum of iron. He has covered the entire region of spectrum from extreme red to ultra violet at present available for photographic record. The positions of about 4000 iron lines have been determined to a degree of accuracy entirely satisfactory to Dr. Burns, and to Professor Heinrich Kayser under whose direction the work has been conducted.

Regent William H. Crocker has generously provided the sum of \$1600 to meet the expenses of special instruments required in the solution of certain interesting problems. These researches, conducted principally by Dr. Curtis, have not yet been completed, and the time has not come to report upon them.

The support of the D. O. Mills Observatory at Santiago, Chile, following the lamented death of Mr. Mills, was generously assumed by his son, Mr. Ogden Mills. Funds to the amount of \$15,000 were provided late in 1910 to cover the expenses of the work in the Southern Hemisphere during the years 1911 and 1912; and in February, 1912, Mr. Mills made a further contribution of \$15,000 to provide for the years 1913 and

1914. The publication of the results for the brighter stars for the years 1903 to 1906 have given rise to numerous expressions by astronomers concerning the fruitfulness, accuracy, and importance of the work at Santiago. The studies concerning the motion of the solar system through space and the structure of the stellar universe, which we have been able to make on the basis of observations secured at Mount Hamilton and at Santiago, have increased the demands for knowledge concerning the motions of fainter stars. This field of research has proved to be one of exceeding richness, and ten leading observatories in the Northern Hemisphere are devoting a large proportion of their resources to its cultivation. The D. O. Mills Observatory was the first to enter this field in the Southern Hemisphere in 1903. A few years ago the Cape of Good Hope Observatory began to devote a share of its resources to the prosecution of similar researches. It is, of course, impossible that the two southern observatories should extend the work as rapidly as the ten institutions in the Northern Hemisphere, and it is a well recognized fact that the northern results cannot assume their full strategic value, nor even approach their full strategic value, until they are balanced by similar observations in the southern sky. The deficit of southern results will be severely felt in a few years, and it is desirable that more powerful equipments join in studying the radial velocities of southern stars. It is not an overstatement to say that astronomers everywhere are grateful to Mr. Ogden Mills for extending the life of the D. O. Mills Observatory.

The Lick Observatory has been called upon to make repairs following three severe earthquakes occurring within eight years: those of August 2, 1903, April 18, 1906, and July 1, 1911. All of these were assigned intensities VII or VIII on the Rossi-Forel scale. That of 1906 was the least severe of the three, and that of 1911 was by far the most destructive. The principal items of damage in 1911 were as follows:

Essentially all chimneys on Observatory buildings and residences were broken off at the roof lines. Those on the main building have been replaced by others of heavy galvanized iron construction.

The various retaining walls, of brick construction, were badly damaged.

The large three-story brick residence was so severely damaged that it was vacated immediately, and condemned upon examination by an expert engineer. Other quarters were prepared for the family which had occupied the destroyed residence, some of the assistants were kindly taken into the households of the families occupying other houses, and others of the assistants were assigned to rooms in the fireproof photographic building. The Regents of the University promptly authorized the replacement of destroyed residence space by other structures earthquake-proof in quality. After thorough consideration of our requirements it has been decided to construct a three-story reinforced concrete dormitory on the site of the destroyed brick building, in size a little less than two-thirds that of the brick building, and to compensate for space there sacrificed by erecting two six-room wooden residences, about a quarter of a mile to the east of the main buildings. The brick residence was removed in May and June of this year, and the erection of new buildings is under way. It is hoped that the three buildings will be enclosed before the coming of winter.

Inasmuch as the weight of cement, lumber, sand, plaster, steel, and other materials (exclusive of rock) required in the construction will approximate 900 tons, the questions of freight charges and of having the materials at the summit when the large force of workmen will need them have called for serious consideration. Former freight charges on materials from San Jose to the summit, \$10 per ton, and on sand from the neighboring creek beds to the summit, \$5 per cubic yard, have been advanced an average of 16 per cent, and I have been unable to receive proper assurances that the freight, even at the advanced rates, would be delivered on time. Owing to these difficult conditions and the necessity for enclosing the buildings before the coming of the rainy season, the Regents of the University have authorized the purchase of a gasoline motor truck. Regular service with the truck began on June 12th, and since that date the truck has made two round trips nearly every day



from San Jose to the summit, carrying three tons per trip. Reasons why deliveries may not continue at the same rate have not developed. A corresponding rate of delivery by horse-drawn vehicles would require the services of approximately seven wagons and twenty-eight horses. Our freighting problem in the past years has not been a simple one. Supplies for the Observatory and the community have frequently remained in San Jose three or four weeks awaiting the pleasure of the freighter; and it is unnecessary to comment upon the resulting lack of efficiency in carrying out many of my plans.

A frame building, with floor plan 26 feet by 50 feet, one and a half stories high, located on the south slope east of the barn, has just been completed. Its principal purpose is to provide living quarters for the force of workmen engaged on the earthquake replacement construction. It will be available for similar duty in future construction periods, and for general storage purposes. It has been designed also to provide shelter for the motor truck. The cost of this building has been divided into two parts, on the following basis: First, the cost of a temporary building to accommodate the workmen engaged in this year's construction was estimated, and such of the materials, labor and freight as amount to that sum have been made a charge against the special earthquake replacement fund; second, the remaining actual cost of the building, incurred to give it permanent character, has been made a charge against the annual budget of the Observatory.

The spring in the south canyon, which has served as our principal source of water supply, was affected by the earthquake. The flow of water was greatly increased, and this increase was maintained until early in November, when the flow rapidly decreased to about one-quarter normal for that season of the year. The indications are that new outlets to the natural storage for the spring were opened by the earthquake, and there is grave anxiety that the drainage of winter rains may hereafter be too rapid during the winter and spring months, causing the flow during the dry summer and fall months to be abnormally low. In view of the uncertainty, and to guard against serious em-



barassment in the shortage of water supply, a pump driven by electric motor has been secured for installation at the spring, in order that the entire output may be pumped to the summit. Heretofore the automatic pump upon which we have depended has pumped but one gallon in every seven to the summit, the other six gallons supplying the motive power.

The two brick storage reservoirs on Kepler Peak, capacity 160,000 gallons, and the two brick reservoirs at Aquarius spring in the north canyon, were cracked in many places by the earthquake. The materials in the vicinity of the cracks have been cut away and replaced by concrete. Several of the reservoirs were cracked by the earlier earthquakes, and these repairs must be regarded as temporary. It is extremely desirable and almost a necessity that the next Legislature make provision for replacing these brick reservoirs by others of steel construction.

The Riefler constant pressure clock was dismounted and damaged by the shock, and the glass case enclosing it was broken.

Fortunately none of the most expensive instruments of the Observatory were injured, although the 36-inch refractor was moved on its supporting pier until it came in contact with the heavy observing floor in the dome.

It was our greater good fortune that there were no personal injuries.

The independent studies of Templeton and Wood have established that the effective center of the earthquake disturbance was about ten or twelve miles south of the summit of Mount Hamilton.

The reinforced concrete vault building and the steel water tank, both of which were completed in the year 1909, gave no indications whatever that an earthquake had occurred.

Plans are under way for undergrounding the electric lighting, power and telephone lines from the switchboard easterly as far as the schoolhouse.

The automobile service for mail, passengers, and small freight has continued without interruption during the biennial period, except on a few winter days when the summit was covered with deep snow. On such occasions the service through the deep snow was conducted by the Observatory workmen. A return to horse

drawn stage would be regarded as almost calamitous. In passable weather there is scarcely a day when private automobiles do not bring visitors to the summit, and on many days a large number of automobiles arrive. The number of visitors arriving in horse stages is relatively very small. The duty of conducting visitors through the Observatory buildings has been complicated by the irregularities in the times of arrival.

The library of the Observatory is excellent in all departments closely related to the lines of research undertaken here, but in other departments, especially in that embracing the history of astronomy and in the sciences closely allied to astronomy, it could easily be better. It is my policy to improve it in every possible manner, but unfortunately not many dollars can be spared for this purpose from the funds for the general maintenance of the Observatory. We are all anxiously looking forward to the time when the library may be added to and cared for by virtue of an annual fund of definite amount.

Astronomer Tucker was away from Mount Hamilton during the period May 1, 1908, to October 15, 1911, on three years' leave of absence granted to afford him the opportunity of installing the meridian observatory of the Carnegie Institution of Washington, at San Luis, Argentina, and of superintending the work of that observatory, under the direction of Professor Lewis Boss, who remained at Albany. Mr. Tucker and his staff of ten assistants set a pace which had never been approached in observations of this class, by securing 87,000 complete meridian observations of stellar positions in less than two years of actual observing, April, 1909, to January, 1911, inclusive. The months prior to the period described were devoted to the construction of the observatory and of the living quarters, and the months following the observational period were used in dismounting and returning the instruments to Albany, and in well deserved vacation. While the subject is one in which the Lick Observatory has no responsibility, it is a satisfaction to record in passing that the observations secured by Mr. Tucker and his staff will form a vital part in Professor Boss's great catalogue of extremely accurate stellar positions covering the entire sky.

During the years 1906-08 Mr. Tucker had prosecuted energetically an observing programme for fundamental determinations of star positions. The reductions of these observations were held in abeyance during his absence, and his duties during the current academic year have related almost entirely to the preparation of the 1906-08 results for publication.

Throughout the whole of the observing programme referred to, the position of the meridian instrument with reference to the fixed meridian mark (mire) was systematically determined. A discussion of these determinations has shown that there was a daily periodic variation in the position of the mire itself; and an investigation of similar readings secured since 1893 has established that there has been an annual periodic variation of the position of the mire since that date. There had also occurred a small progressive change, practically continuous, for the interval 1904-08, and observations made late in 1911 seem to show that the progressive change continued, perhaps uninterruptedly during the interval 1908-11. The daily periodic variations may well be due to the diurnal heating and cooling of the surface rock strata in the vicinity of the mire, and the annual variations may have an analogous cause based upon the temperatures of summer and winter; but the progressive change seems to imply a gradual settling of the immediate supports of the mire or of the underlying rock strata, and the situation is puzzling. The mire is about ninety feet south of the meridian instrument. There is no site available on Mount Hamilton itself for a more distant meridian mark, but it may be possible to erect a mark three or four miles to the north on the crest of the nearest ridge lying in that direction. It is hoped to determine the merits of such a plan in the coming summer. Mr. Tucker's discussion of the general subject is contained in Bulletin No. 213.

It is well known that most meridian observers note the transits of brilliant stars across the lines in their instruments relatively earlier than the transits of faint stars. At intervals since 1896 Mr. Tucker has secured extensive series of observations to evaluate his personal equation as affected by the brightness of the stars under observation. His equation has been remarkable

for its constancy: bright stars have been observed relatively too early to the extent of 0.009 second of time per visual magnitude; that is, a first magnitude star is observed too early with reference to a seventh magnitude star by about 0.054 second of time.

Mr. Tucker has recently observed a selected list of stars, at the request of the Superintendent of the United States Coast and Geodetic Survey.

The Lick Observatory double star survey of the northern sky, which was originated in all its essential features by Dr. Aitken in April, 1899, has continued to receive a large share of his attention. Professor Hussey had joined in the prosecution of the survey from July, 1899, to May, 1905. Our splendid summer weather enabled Dr. Aitken to complete the survey for the northern summer sky nearly two years ago. Of the 20,625 square degrees in the northern hemisphere 19,225 square degrees have been completed, leaving incomplete about 1400 square degrees, mainly between 6 hours and 10 hours of right ascension and in regions near the equator. Estimating the area from the equator to declination  $22^{\circ}$  south at 9000 square degrees, we may say that 7740 degrees have been completed and 1260 square degrees, mainly between 2 hours and 10 hours of right ascension, of which 1100 degrees are south of declination  $-14^{\circ}$ , are still unobserved. Except for Dr. Aitken's ill health in the winter of 1910-11 and for the uncommonly poor winter and spring of 1911-12, the survey should now be essentially complete. In the progress of the survey Professor Hussey discovered about 1300 double star systems and Dr. Aitken about 2500. The number of new pairs found by Dr. Aitken in the last biennial period is 265.

My last report called attention to the facts that the survey should be extended to the south pole of the sky, and that Dr. Aitken is the logical man for this work. One method of accomplishing this result rested upon the exceedingly generous offer of Director Innes of the Union Observatory, Johannesburg, South Africa, to afford to Dr. Aitken the use of the 26-inch refractor whose completion was expected early in the year 1911. Unfortunately, more than a year following that date, the opti-



cian who is constructing the telescope has not yet secured satisfactory glass castings from which to make the lenses of the telescope. Several other observatories which have let contracts for refracting telescopes of considerable size find themselves in the same unfortunate predicament. If the Lick Observatory is to undertake the extension of the survey at all, the beginning should be made in the year 1912, as this plan would involve the minimum of disorganizing effects.

During the biennial period Dr. Aitken has secured 1050 complete sets of micrometer measures of double stars. He has computed orbits for eight well known double stars, whose periods of revolution are short, as follows:

Epsilon Hydrae	15.3	years
Burnham 883	16.69	years
Burnham 612	23.15	years
Burnham 101	23.34	years
Burnham 395	24.5	years
Burnham 581	46.5	years
Otto Struve 235	72.	years
Otto Struve 79	89.	years

Valuable measures of 159 double stars made outside of assigned duties by Mr. C. P. Olivier, Carnegie Assistant, partly in this and partly in the preceding biennial period, were published in Bulletin 190.

Observations of the Struve double stars made by Professor Hussey in 1901-03, principally with the 12-inch telescope, which remained unpublished during the following decade, have been issued as Bulletin 206.

During the years 1910-11 Dr. Aitken secured 39 complete sets of measures of the four satellites of Uranus, each set comprising eight or ten micrometer measures of direction and eight or ten measures of distance. These observations, including Dr. Aitken's former series, beginning with 1898, are now being utilized by Professor Hermann Struve, Director of the Royal Observatory, Berlin, as the basis for a complete discussion of the orbits of the four Uranian satellites. It is of interest to note



that Struve's recent comprehensive orbital determinations for the two satellites of Mars are based upon Dr. Aitken's micrometer measures with the 36-inch refractor, and upon a shorter series of similar observations secured by Professor Barnard with the 40-inch refractor of the Yerkes Observatory.

Accurate observations of the positions of comets were made as follows: 5 observations by Dr. Aitken; 24 observations by Mr. Young, Fellow; 41 observations by Mr. Kiess, Fellow.

Micrometer determinations of the positions of asteroids were secured as follows: 18 observations by Mr. Kiess.

Accurate positions of asteroids were determined by means of photographs as follows: 16 observations by Dr. H. C. Wilson; 10 observations by Mr. Kiess.

Photographs of comets for use in studies of their structure and internal motions were secured as follows: 25 photographs of Comet *c* 1911 (Brooks) by Dr. Curtis with the Crossley reflector; 3 photographs of Comet *g* 1911 (Beljowsky), 3 photographs of Comet *b* 1911 (Kiess), and 12 photographs of Comet *c* 1911 (Brooks), by Mr. Kiess, with the Crocker telescope. Comet *b* 1911 was discovered by Mr. Kiess by means of a photograph which he had obtained in searching for Encke's comet.

The spectra of comets *b* 1911 (Kiess), *c* 1911 (Brooks), and *g* 1911 (Beljowsky) were observed by Astronomer Wright. On account of the unusual intrinsic brilliancy of Comet *c* 1911 and the length of time it remained in positions favorable for observation, extremely valuable observations of its spectrum were secured. These have been published in Bulletin 209.

A preliminary orbit and later an improved orbit of Comet *c* 1911 (Brooks) were computed by Mr. Young, and published in Bulletins 200 and 202, respectively.

Elliptic elements for asteroid 1909 HZ were computed by Mr. Young, and published in Bulletin 191.

Elliptic elements for asteroid 1909 IIC were computed by Mr. Young and Dr. H. C. Wilson, and published in Bulletin 192.

In the past two years "new stars" have appeared in the constellations Sagittarius, Lacerta and Gemini. Their spectra have been photographed and studied by Mr. Wright. Nova

Sagittarii was faint and unfavorably situated for observation, but results of considerable value were secured. The accurate position of Nova Sagittarii was fixed micrometrically by Mr. Olivier. The results for this star are contained in Bulletin 195.

Nova Lacertae offered better conditions for observation, and the photographs recorded the spectrum from extreme red to ultra-violet. During the observation period the spectrum passed through the transformations usual in such cases, from the so-called "new star" spectrum to a spectrum consisting of broad bright bands occupying the positions of the nebular lines. The accurate position of Nova Lacertae was determined from plates taken with the Crossley reflector by Dr. Curtis. The results for this star are published in Bulletin 194.

The spectrum of Nova Geminorum is at present under investigation on the basis of a large number of photographic spectra secured by Mr. Wright prior to June, 1912. During the last few weeks of its appearance Mr. Wright noted the gradual coming in of the bright bands which are characteristic of nebular spectra. Position observations of Nova Geminorum were secured with the meridian instrument by Mr. Tucker, promptly following the announcement of discovery.

Because of assistance afforded by the photographic plate, and of the watchfulness of variable star observers, the number of new stars which have been detected in the past two decades is in excess of the number observed and recorded in the previous history of astronomy. Some of the novae have been remarkable for the rapidity with which their brightness has increased: in one case the brilliancy increased fully 10,000-fold in the course of three days. The main purpose of new star investigations is of course to determine why and how these objects, more or less brilliant, should appear with startling suddenness at points where no stars had previously been observed. The strong resemblances in the spectra of all recent novae lead to the conclusion that in them we are studying a distinct type of phenomenon, or phenomena which are the results of general or at least widely prevailing causes. The accumulated evidence lends greatest weight to the theory that the materials composing a new star

previously existed in a dark or invisible state, or as a very faint star, and that incandescence has been the result of the rushing of a dark body through a cloud of resisting particles. The collisions between the dark body and the resisting medium appear to produce disturbances, or transformations of dark materials into incandescent materials, which are, so to speak, but skin deep. The complicated spectrum of bright and dark lines which is observed early in the history of each apparition gives way in the course of a few weeks or months to the spectrum of a faint nebula, and the nebular spectrum in turn, so far as the faintness of the bodies has permitted us to carry the observations, appears to be transformed later into the spectrum of an ordinary faint star. Photographs secured before the appearance of new stars are in no case sufficient to justify the statement that the novae did not previously exist as very faint stars of ordinary character. It is not improbable that "new stars" are in reality faint ordinary stars whose luminosities have been tremendously increased by virtue of their rushing through resisting media; and they would seem to return rapidly to their previous state following the termination of bombardments by the resisting particles.

Sixteen Crossley Reflector photographs of novae have been secured by Dr. Curtis. Some of these, with long exposure times, were taken for the purpose of recording and detecting possible nebulous structure surrounding the novae, such as was observed in the case of Nova Persei. Structure of this kind has not been observed in the vicinity of any of the recent novae.

Dr. Curtis obtained 44 Crossley Reflector photographs of the Ring Nebula in Lyra for the use of Dr. Newkirk, recently assistant in the Lick Observatory, in his investigations on the distance of the Ring Nebula. Of other Crossley photographs obtained by Dr. Curtis we may refer to 24 plates exposed at the request of Harvard College Observatory, on certain definite regions of sky, for assistance in the Harvard determinations of standards for faint stellar magnitudes; and to 30 photographs of nebulae and star clusters, mainly of objects not hitherto photographed.

Under Dr. Curtis's supervision Professor Morehouse, of Drake University, and Mr. W. F. Meyer, of the Berkeley Astro-

nomical Department, secured Crossley Reflector photographs and positions of the three outer satellites of Jupiter: six of Satellite VI, seven of Satellite VII, and six of Satellite VIII. The results are ready for publication.

The Crossley Reflector was used by Dr. Keivin Burns, Carnegie Institution Assistant, during the year 1910-11, in extensive studies of the Great Nebula in Orion, and of the Ring Nebula in Lyra. The results for the latter were published in Bulletin 193.

Many of the photographs of the solar corona, obtained by Astronomer Perrine on the occasions of recent Crocker eclipse expeditions, have been carefully studied by Mr. Young. His results, forming a thesis in partial fulfillment of requirements for the degree of Doctor of Philosophy in the University of California (May, 1912), have established that the proportion of polarized light to unpolarized light in the corona varies with the angular distance from the edge of the sun, but is independent of the direction from the sun's center. The observed polarization is much greater in the blue rays than in those of longer wave lengths. Mr. Young concludes that two-thirds or more of the light of the corona is due to the scattering, by small coronal particles, of the light from the sun which falls upon those particles.

As in preceding years, the most extensive investigations in progress at Mount Hamilton are based upon spectrographic determinations of stellar velocities, by means of the D. O. Mills spectrograph attached to the 36-inch refractor, and with the coöperation of the D. O. Mills Observatory on Cerro San Cristóbal, Santiago. The task of securing four or more spectrograms for every star down to the fifth visual magnitude, excluding those whose spectra do not contain lines measureable with fairly high dispersion, has been entirely completed at Mount Hamilton for the northern sky, and is in effect complete for the southern sky. In addition, several hundred spectrograms of stars fainter than the fifth visual magnitude have been secured at Mount Hamilton, and perhaps a thousand such spectrograms at Santiago. The numbers carried by the spectrograms obtained



at Mount Hamilton during the biennial period extend from 6530 up to about 7925, though a few one-prism spectrograms secured are included. The spectrograms obtained from the beginning of observation at Santiago, in 1903, up to July 1, 1912, number about 4400. All of the spectrograms, both north and south, have been measured and reduced definitely, excepting a few relating to spectroscopic binary stars whose investigations have not yet been commenced. The observations of the past two years on Mount Hamilton have been secured chiefly by Dr. H. C. Wilson, Messrs. Olivier, Young, Merrill and Kiess, Dr. R. E. Wilson, and Mr. Sheppard. All of these have taken part in measuring the spectrograms, but the most extensive measurements and reductions of the spectrograms have been made by Miss A. M. Hobe and Dr. Keivin Burns, Carnegie Institution Assistants, and Dr. H. C. Wilson and Dr. R. E. Wilson.

Extended studies of the systematic errors which affect the results for individual spectral lines have been made especially by Dr. Burns.

A large number of southern spectrograms remaining unused at the beginning of the biennial period have been measured and reduced by Dr. Curtis and Mr. Olivier.

My last report mentioned many interesting results as described in the Silliman Lectures, which came from a discussion of the radial velocities of 1060 stars and 13 nebulae then available. A year later, in the early spring months of 1911, the available velocities of 1193 objects formed the basis for more extended studies of stellar motions. Space is lacking for detailed presentation of results, but I shall state a few conclusions in general terms.

In preparing the Silliman Lectures I had found the algebraic mean velocity of 138 Class B stars to be  $+4.93$  km. per second whereas I had expected a value differing little from zero. A literal interpretation of this residual velocity would signify that the universe of Class B stars is expanding, with reference to the position of the solar system as a center, at the rate of 4.93 km. per second; but I did not attach great weight to this interpretation. It was assumed as a more probable explanation that in



the Class B stars the wave lengths of the lines of the elements hydrogen, helium, oxygen, carbon, etc., differ from the laboratory determinations,—perhaps owing to the existence of greater pressures in the atmospheres of the stars.

Professor Kapteyn announced late in 1910 that the Class B stars in a large region of the southern sky are essentially all traveling along parallel lines with equal velocities, such that they are receding from the point of space occupied by the solar system at the rate of 5 km. per second; and that the Class B stars in another great region of northern sky, exactly opposite to that referred to in the southern sky, are similarly traveling together along lines nearly parallel, with velocities nearly equal, such that they are receding from the point occupied by the solar system with a speed of about 5 km. per second.

Believing that the speed 5 km. per second assigned by Kapteyn to the two groups of Class B stars corresponded exactly to the mean algebraic velocity  $+4.93$  km. per second which I had found a year earlier, I made a new investigation of the Class B velocities. The measured radial velocities of 225 stars were available. The discussion established beyond question that the algebraic mean radial velocities of Class B stars are on the average about  $+4.6$  km. per second, not only in the two Kapteyn regions of the sky, but in all regions where the stars of this class are found. We were justified in calling this prevailingly positive residual velocity an unavoidable systematic error of observation. In all probability it is due to the prevalence of special conditions, such as high pressures, in the atmosphere of the Class B stars. After making due allowance for this systematic error, the motions of the two Kapteyn groups of stars were found to possess the same characteristics as the groups of Class B stars in other regions.

The motion of the solar system was re-determined with reference to the 1193 radial velocities. It was found that the solar system is moving with a speed of 19.5 km. per second toward the point in the sky whose right ascension is  $268^{\circ}5$  and whose declination is  $+25^{\circ}2$ .

The speed of the solar motion was also determined with reference to the stars in each of the principal spectral classes. The components of observed stellar radial velocities which are due to the motion of the observer along with the solar system were then computed and removed from the individual observed motions, leaving the velocities of the individual stars with reference to the systems of observed stars. A few of the results are here given.

Stars of spectral class	No. of stars	Velocity of solar motion	Systematic errors	Average radial velocities
B	225	20.2 km. per sec.	+4.1 km. per sec.	6.5 km. per sec.
A	177	16.8 km. per sec.	+0.95 km. per sec.	10.95 km. per sec.
F	185	15.8 km. per sec.	+0.06 km. per sec.	14.37 km. per sec.
G	128	16.0 km. per sec.	—0.20 km. per sec.	14.97 km. per sec.
K	382	21.2 km. per sec.	+2.82 km. per sec.	16.8 km. per sec.
M	73	22.6 km. per sec.	+3.93 km. per sec.	17.14 km. per sec.

According to the generally accepted ideas of stellar evolution the stars are supposed to have greater effective ages in the order of spectral classes B, A, F, G, K and M. Our sun is of Class G. We note that the velocity of the solar motion is smallest with reference to the systems of Class A, Class F and Class G stars. In brief, our sun seems to partake of the motion of those stars that are of its own or slightly earlier effective age more than of the motions of the stars which are much younger and of stars which are older.

The systematic error of resulting stellar velocities is very small for Class G stars, presumably because our own solar spectrum, of Class G, has been used as the basis of wave lengths utilized in all the investigations. The systematic error for Class F stars is likewise extremely small. This error appears to increase as we proceed from the stars of Classes F and G toward the newer stars, in Classes A and B, and toward the older stars, in Classes K and M, presumably owing to conditions prevailing in those stars such that the wave lengths assumed for the lines in their spectra are unavoidably in slight error.

Kapteyn's discovery that the stars have a preference for motion toward and away from two opposite points of the sky

was confirmed by the 1911 discussion of our spectrographic results, though the preferential motion was more strongly indicated by the 1909-10 discussion than by that of 1911.

It appeared from our later investigations that the preferential motion does not exist appreciably in the Class B stars. It is strongly indicated in the Class A stars and progressively less strongly in the stars of Classes F, G and K. It is doubtful if the effect exists in the brighter Class M stars.

It definitely appeared that the Class A stars not only have preferential motions in the Kapteyn directions, but that their motions in general have a preference for small angles with the plane of the Milky Way. This conclusion has been confirmed upon the basis of our radial velocity data by Professor H. C. Plummer as a result of his valued study of the subject in Bulletin 212.

Prior to 1910 it had been held that the bright stars of Classes B and A are on the average two and a quarter times as far away as the brighter stars of Classes F, G, K and M. Our spectrographic results as discussed in the Silliman Lectures showed that this view was erroneous. The more extensive consideration of the subject in 1911 confirmed fully our conclusion that the brighter stars of Classes B and A are at the same average distance as the brighter stars of Classes F, G, G, and M. However, a study of our radial velocity results by individual spectral classes, in connection with the proper motions assigned to the same stars in Professor Boss's Preliminary General Catalogue of star positions and proper motions, established beyond question that the bright stars of Classes F and G, which are those most nearly resembling our sun in spectrum, are on the average much nearer than the stars of corresponding brightness in the earlier spectral Classes B and A and the later spectral Classes K and M. This result had been established previously for Class G stars. Our results seem to permit us to say that the bright stars are the nearer to our sun the more nearly they approach the F and G spectral classes, and conversely the more distant they are from our sun the more their spectra diverge from the F and G spectral classes. Professor Boss's simultaneous

and independent discussion of the same subject, based upon proper motion data, leads to substantially the same results.

Our recent studies have confirmed the result announced in the Silliman Lectures that the scale on which the universe of brighter stars is constructed is a great deal larger than we had previously supposed.

The discovery that the average velocities of the stars are functions of their spectral classes, increasing with advancing effective ages, made in January, 1910, and announced in the Silliman Lectures, is abundantly confirmed by our later investigations, as shown in the last column of the table above.

Perhaps the most interesting and important bi-product of the spectrographic researches referred to is the discovery of systems of close double stars known as spectroscopic binaries. The proportion of observed binaries amongst the stars whose radial velocities have been observed is increasing with the lapse of time. The explanation of the increase is a simple one: The component stars in spectroscopic binaries of the older spectral classes are more widely separated than is the case amongst binaries of the early spectral classes. The periods of revolution in the older systems are longer and the variations of radial velocity are smaller and slower. The discovery of these variations requires that the observations cover longer periods of time. By virtue of the observations secured by the D. O. Mills spectrograph at Mount Hamilton, by the D. O. Mills Observatory at Santiago, and by the Bruce spectrograph of the Yerkes Observatory on the stars of Classes B and A, we may say that one star in four, on the average, of all the stars down to the fifth visual magnitude, is a double star whose component stars are so close together that the most powerful telescopes are unable to separate them. With the progress of time, as stated above, the ratio has increased, and I think we may be able to say in another decade that at least one star in every three is a spectroscopic binary system; and I should be surprised if the observations of the twentieth century do not establish that one star in every two and a half, on the average, is composed of two or more suns revolving about their mutual center of mass. These systems are not sporadic cases



in the domain of sidereal evolution; they must in fact be the results of general or widely prevailing tendencies in stellar life.

The high efficiency of the D. O. Mills Expedition has been fully maintained by the devotion of Dr. Joseph H. Moore, Acting Astronomer in charge, and of those who have been associated with him. Mr. George F. Paddock left the employ of the Expedition at the conclusion of five very satisfactory years of service, in July, 1911. He was succeeded by Mr. Roscoe F. Sanford, formerly Carnegie Institution Assistant at Mount Hamilton. The majority of the spectrograms have been measured and reduced by Mrs. Joseph H. Moore. Dr. Paddock has been appointed Assistant in the Lick Observatory for the academic year 1912-13.

The orbit of the spectroscopic binary Xi Serpentis has been determined from 27 plates obtained with the D. O. Mills spectrograph, by Mr. Young, and published in Bulletin 203.

Mr. Merrill computed the orbit of the spectroscopic binary Beta Capricorni from 45 observations made with the D. O. Mills spectrograph. The results are published in Bulletin 178.

Mr. Merrill has secured more than 100 spectrograms of stars whose spectra contain bright lines, as a partial basis for a thesis looking toward the degree of Doctor of Philosophy.

Mr. Kiess has obtained 31 spectrograms of RR Lyrae, an especially interesting variable star, as a partial basis for a thesis looking toward the degree of Doctor of Philosophy.

An interesting study of the spectrum of P Cygni, an especially interesting bright line star, made by Mr. Merrill, is published in Bulletin 201.

Dr. H. C. Wilson, Director of the Goodsell Observatory and Editor of *Popular Astronomy*, resided at Mount Hamilton during his Sabbatical year 1910-11, as assistant, with principal duties in the spectrographic researches. He has recently utilized our radial velocity observations of 100 stars having large proper motions as the principal basis of a valuable paper which forms Bulletin 214.

Many studies of a minor nature cannot here be described. from lack of space.



Six lectures were delivered before the class in General Science in the University in the fall of 1911 by Dr. Aitken. Six lectures before the class in General Astronomy of the Berkeley Astronomical Department were delivered by three members of the staff in the spring of 1911, and six similar lectures in the spring of 1912. A considerable number of lectures have been given before astronomical societies, schools and colleges in California and in eastern states by various members of the staff.

Director Campbell was absent on leave during five summer months of 1911, and during this interval Dr. Aitken was Acting Director of the Observatory.

The Silliman Lectures, delivered by Director Campbell in Yale University in the year 1910, are passing through the Yale University Press.

Director Campbell was elected Foreign Member of the Royal Academy of Sciences of Upsala, Sweden, in 1911, and Fellow of the American Academy of Arts and Sciences, Boston, in 1911.

The Director acknowledges with pleasure the support which he has received from every member of the staff, and desires especially to thank those of the D. O. Mills Observatory at Santiago, Chile, and those of his colleagues at Mount Hamilton who have assisted in securing and measuring stellar spectrograms and in making calculations relating to the motions of the stars.

Respectfully submitted,

W. W. CAMPBELL,  
Director of the Lick Observatory.

DEAN OF THE LOWER DIVISION  
(ADVISOR)

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BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: Since my last formal report to you, in 1910, the general work of this office has been carried out along the lines there laid down. The first important task to be undertaken was to foster a spirit of friendly coöperation between the younger students of the university and the members of the teaching force. The system devised was intended to make use of the desire of a considerable number of the faculty to get into close personal relations with students, in such a way as to help the freshmen to bridge over the chasm which divides the methods and environment of the preparatory school from those of the university.

The plan has been in operation now some four years, a full college generation: it is a proper time to inquire whether it has really taken root and is being justified by its results. On this point there is, I believe, but one opinion among those who have taken active part in the work. The students, who during the first year or two, looked at the scheme somewhat askance, imagining it to be disciplinary in character, have now generally accepted it as what it was intended to be, an opportunity for them to form personal ties, to have among the faculty, friends who might take more than a merely academic interest in their problems. More and more the freshmen are seeking advice on things outside the academic routine, and more and more the tie formed in the first year is leading to continued relations in the later years of the college course.

A few changes have been made during the past two years in enlargement and elaboration of the plan. Several new advisors have been added to the board in order to keep pace with the increasing numbers of freshmen admitted to the university, the intention being that no one advisor should have more than twenty freshmen under his care. The organization of the board has been made a little more compact and its discussions brought into somewhat more definite form through frequent meetings of a sub-committee which deliberates on questions to be brought before the larger meetings. With the coöperation of the recorder, the plan has been introduced of calling upon all lower division instructors twice each semester for graded reports on attendance and scholarship for all freshmen and sophomores, and although it has been found impossible to get anything like full reports of this sort, yet such as are received are proving of great value to the advisors in keeping track of the work of the students in their groups. The inspection of boarding houses, and the publication of a list of those approved by the committee on outside relations, at the beginning of each semester, has now become an established order, and although much remains to be done in order to solve the boarding problems of the students, yet conditions are at least better than they were. And perhaps most important of all, the plan alluded to in my last report, for interesting the upper classmen in fraternities, clubs, and other organizations, in the problems of the advisors, has developed into a very promising system. The development has been mainly on the initiative of the students themselves. Each step has been taken after full discussion by representatives of these organizations. No attempt has been made to force any "system" upon them; yet a pretty definite system has developed. In August of each year, each fraternity and club chooses one of its senior members as its permanent representative for the year. These representatives meet twice each semester, under the chairmanship of the dean of the lower division, for the discussion of the mid-term scholarship reports and such other questions as may be of common interest. To these representatives are sent by the recorder the mid-term reports of the lower classmen of the

respective organizations and all other official information which may have reference to these younger students. The representatives report to their respective chapters, discuss with them the questions which may have been raised in the meetings, and in general assume a certain responsibility for their fellows. There is also a growing custom on the part of these spokesmen to consult with the dean of the lower division or with the separate advisors or instructors in matters pertaining to the welfare of their delinquent fellow members. Much interest has been shown by these organizations in the semi-annual reports of relative scholarship standing. Two years ago these reports had just been prepared for the first time—to the close of the academic year 1908-09. In 1910 and 1911 they were again made up, and since then, at the request of the organizations themselves, the records are being tabulated semi-annually. A comparison of the records shows the beginnings of good results of the friendly rivalry thus created. Nearly every fraternity and club has raised its standard of scholarship at least a little, and a considerable number have made a marked advance. Very few show a decline, and the general average has arisen. The average for all fraternities together is still below that of the clubs and of the non-affiliated students, but there are indications that this will, in the not very distant future, cease to be the case. In the last records compiled, a fraternity for the first time took the highest rank in the list. A very hopeful sign in this connection is the increasing frequency of inquiries from national officers of fraternities, alumni members, and parents of prospective initiates, concerning the standing of the organizations. It is perhaps a hopeful sign, too, that the development is slow—it indicates a greater healthfulness of growth.

The discussions at the meetings of representatives have not, however, been confined to questions of scholarship alone. The gatherings are becoming an opportunity for the exchange of ideas on various topics affecting the common interests. For example, during the past year one meeting was devoted to the question of the advisability of forming some sort of agreement as to "rushing" and initiations, and a committee was appointed



which after somewhat extended correspondence with eastern universities, presented a report of considerable value on the practice obtaining in other institutions. No attempt was made to adopt any formal agreement, but the free discussion of such topics is in itself of more than passing value. Another committee investigated at some length the relationship between university fraternities and clubs and the high school fraternities, and a meeting was given over to the discussion of their report.

Significant interest has also been aroused by the compilation, during the past year, of scholarship records for all permanent student organizations such as the glee club, mandolin club, football and baseball squads, track athletics, boat crew, the Senate, etc. The staff of the Daily Californian stands at the head of the list with 65.1 % first and second grades. They are followed closely by the Senate (64.5%), the crew (64.2%), the tennis club (62.6%), and the English club (61.0%). The lowest on the list are the baseball men with 38.5%; but the freshman football squad is a close second with 39.7%. The average for all undergraduate men is 56.4%.

Such, in outline, is our method of caring for the interests of lower division students as it has developed to the present time. Some details of it are not yet working smoothly, but I believe we are on the right track. The early association between the advisors and their students would be a little more definite and helpful, if the advisors were given full authority to endorse the study-lists of all freshmen. This is now true in regard to students in the colleges of letters, social sciences, natural sciences, and agriculture, but the other colleges, to which belong a majority of the men students, have not yet been willing to surrender their authority. The advisors and the upper class representatives of clubs and fraternities could also work more efficiently if they had full records of the students' high school work and could get complete and prompt mid-term reports from all lower division instructors. The first of these two needs could easily be filled by changing the form of the high school recommendations so as to include in them the pupil's complete record, but a resolution to that effect was recently rejected by the Academic Coun-



cil. The second requirement, the more important of the two, could only be met by rather fundamental changes in the lower division work. The character of these changes was indicated in a lengthy report which I sent you in April last. Another improvement which would be worth while would be the provision of some method by which the advisors might be notified of cases of illness among their advisees, directly by the infirmary authorities. At present the infirmary record goes to the office of the dean of the lower division and the advisors are notified by him. This causes an unfortunate delay. The change suggested would involve a slight additional expense, but it should be made.

Experience with our system, successful as I believe it to be in its way, leads me, however, to a growing conviction that it is after all only a make-shift—a stepping stone to a system which will be more fundamental and will bring back into the university the efficiency of the older college which has been lost through too rapid growth in size.

A university must adopt one of two views: one of extreme *laissez faire*, letting the “fittest” survive; or one which recognizes its responsibility to the community to see that as many as possible of the young people in its care are made fit to survive. For a state university particularly, there can, I believe, be no serious question as to the choice. It must take the material which is sent it and must return to the community a body of well equipped citizens. It cannot contemplate with indifference or equanimity the accumulation of too large a scrap heap. No mere machinery will bring the desired result in efficiency. We are dealing with human units and the development we are looking for is personal and internal. We need to change the attitude of the students themselves, making them realize the truth that what is worth doing at all is worth doing well, that no matter what other excellent things they may get out of four years spent in university associations, they are acquiring a habit fatal to real success if they are content to perform any of their academic duties in a third class fashion. The world has but little use for third rate men: it demands the best.

Now, to develop this sense of responsibility, this passion for excellence, among the student body, in any permanent form, one must discover the fundamental forces, the springs of action in the make up of the student. Only by using these dominant forces can permanent results be attained. Probably the one greatest factor of this sort to be found among a body of American college students in higher degree than in any other aggregations of human beings except religious fanatics is what may be called group enthusiasm. Nowhere else in modern society are to be found conditions so favorable for the development of such enthusiasms. Nowhere else are such large bodies of persons at the age of ideals so closely associated for so long a period, and in an atmosphere so conducive to "higher thinking." We have here a force which constitutes a mighty power for good or ill. If undirected and uncontrolled it is apt to run riot; it froths over in the form of "rushes" and "Bloody Mondays" and all the senseless or positively harmful manifestations of so-called "college spirit." It degenerates into rowdiness at many times and places. Yet the machinery for its control and guidance is very simple and easy to work and we have it in existence in especially workable form here in the University of California. I mean the firmly established habit of self government and the growing and inevitable tendency to form small organizations such as house clubs and fraternities. Already there are forty-two clubs and fraternities among the men of the university, two or three new ones being formed each year. Already considerably over forty per cent of the men are thus organized; and the manner in which their representatives, through the meetings and by the methods above alluded to, have taken hold of the problem of low efficiency in scholarship, is an indication of what their esprit de corps can accomplish when directed into a given channel. The university should fully and frankly recognize the value of such organizations, encourage their formation, help them in their problems of housing, and make use of the amour propre of the groups through stimulating a friendly rivalry between them.

To so foster this development that, instead of forty per cent, practically all of the students will be members of such organizations, the first step would be a provision for proper housing of the groups under the general supervision of the university and the constant oversight of their fellow students. They should live close together and on or near the campus. Dormitories, in the ordinary sense, would not meet the requirement, for they would tend to diminish the sense of solidarity and responsibility of the separate groups. What is needed is, rather, a group or groups of houses, each complete in itself, with full house-keeping equipment, to be leased to fraternities and house clubs. The construction might be such that several units of this sort would be included under one roof, but otherwise there should be nothing to detract from the private household character of each unit. Such construction would, of course, be more costly than that of an ordinary dormitory, for space would be "wasted" in the provision of separate reception rooms, kitchens, etc., yet if private parties can now construct separate houses on high priced land and rent them on profitable terms to clubs and fraternities, it would seem probable that the university could at least get a reasonable return on such an investment as is suggested. The experiment could be tried on a relatively small scale and provision made for expansion as soon as it justified itself.

If we can once get the students of the university thus grouped and thus housed, and can then supply the upper class representatives of the groups with frequent and reliable information as to the class room work of their fellow members, we shall have gone a long way towards solving the problem of efficiency in scholarship. The advantage of such a plan in promoting the moral and social interests of the students is too obvious to require discussion.

Respectfully submitted,

LINCOLN HUTCHINSON,  
Dean of the Lower Division.

## MEDICAL DEPARTMENT IN LOS ANGELES

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LOS ANGELES, July 1, 1912.

*To the President of the University,*

SIR: I have the honor to submit the following report of the Los Angeles Medical Department of the University.

This department of medicine in Los Angeles, teaching the last two or clinical years of medical work, completed its third year under the university in June, 1912, presenting a senior class of 16 students for the degree of doctor of medicine at its commencement, June 20th, with 3 students finishing their junior work.

The great decrease in the number of students in the two years is due to the higher preliminary requirements demanded of the junior class when entering on their first year of medical work at Berkeley. With the adoption of a higher standard of preliminary education there has always been a diminution in the number of students, which has been the common experience of every medical college and university in America on raising the entrance requirements from the high school to the collegiate standard. It has always taken from four to six years to educate the rising generation of students to the increased advantage of a proper preliminary education for the study of medicine and surgery. Certainly, as regards our state university, it must be agreed that its standards of admission and training in its medical courses shall be of that standard to merit the commendation of medical educators throughout the world, as well as to be an example and standard for the other schools of the healing art in our commonwealth. A temporary loss of the number in the student body need, there-



fore, be no cause for discouragement if the standard of instruction and the facilities for teaching be made constantly better. Since this department has been made a part of the University of California both these ends are being attained,—there has been a constant improvement noticeable in the instruction given by the teachers, the work done by the student body, and the facilities for teaching purposes.

With the phenomenal growth of the population of Los Angeles and the desirable location of the university property, in a part of the city where a large dispensary and hospital service can be extended almost without limit, it would seem that this department is bound to grow. The city has already a population of 400,000 and within a decade this will probably be doubled, and the Los Angeles department should have the best means of caring for the poor in this large and growing community and of giving ample facilities for teaching. The already remarkable increase in the Selwyn Emmett Graves memorial dispensary or outpatient department service, giving free treatments and medicines to more than 30,000 patients yearly, or more than 7000 different individuals annually, has placed a severe strain on the dispensary building, the remodeling of which, as well as of the old buildings, has given increased room and facilities for the care of a large number of patients. The loyal service of the dispensary staff of fifty or more physicians in its several branches has had much to do with this phenomenal growth.

Just as the agricultural departments of the state university are doing such splendid service in demonstrating the conservation of the California soil and California plant life, so also are the medical departments doing a twofold service in the conservation of the health and lives of its citizens, as well as in the training and setting a standard of education for those who are to become the guardians of its future public health. The last legislature evidently recognized this fact and the importance of medical education in the south by its appropriation of \$25,000 to improve the old buildings of this department and to erect a new hospital unit, both of which have made possible a much better distribu-



tion of dispensary clinics and the more efficient and economical administration of the increased activity of the institution.

The dispensary work now occupies the entire first floor of the main building and the two floors of the dispensary building, giving the out-patient department sufficient adjacent rooms for all clinical and didactic instruction, as well as a well-equipped laboratory. In addition to the extensive repairs in the old building, the appropriation will permit of a fireproof, two-story hospital unit, the first floor of which will have a capacity of twelve beds and the second floor be made in the future to care for a similar number. In addition a maternity hospital of six beds has been provided. These old buildings and the new unit have been so erected that the Castelar street frontage is reserved for the future hospital buildings which are so greatly needed. The improvement of the old buildings is nearing completion and it is hoped that before the beginning of the session 1912-13 the new unit will be ready. The institution will then start on its broader career of teaching and of service to southern California, in a manner befitting a department of the University of California.

Our dispensary, in an old settled section of the city, is well situated for helping the sick poor and is suitably constructed for this purpose, affording adequate opportunity to those in charge of the instruction of students, and will be an excellent adjunct for supplying patients to the new hospital unit.

The real need for a separate department of medicine of the university in the southern part of the state is very apparent for the following reasons:

*First*—There is abundant clinical material in this city to warrant the university in maintaining a strong medical center which, naturally, could not be utilized for medical education by a northern department. With the opening of the Panama Canal will come an influx of more patients with tropical diseases and it will be impossible for any one department of the university to utilize the clinical material of both San Francisco and Los Angeles.

*Second*—The problem of medical education in California, on account of the extensive territory of the state and the topographical differences existing between the north and south, is greater than that presented by any other state.

*Third*—A state university should set the medical standard for the whole state, which can be done only by a united effort from both the northern and southern parts of the state.

*Fourth*—Each year brings to southern California medical students from the east and other parts of the United States, who for reasons of health in their families, seek the climatic conditions in southern California which cannot be found in the north.

*Fifth*—A state university owes a duty to the young medical men with the best eastern university training, who become residents of southern California, to give them opportunities and encouragement for their development which cannot be given them except by a state university or a similar endowed institution. Many young men come here from such a medical atmosphere, who can give help and force to a university medical department and it seems just that they should have the right to further their medical development through the higher standards which only a university school can give. It is most logical that the state university should be the means of extending the necessary help to this end.

The actual needs for the next two years to improve the clinical work of this department are:

*First*—To further the interests of the university hospital at Los Angeles, owned and controlled by the university. The facilities for the dispensary work have been cared for and irrespective of other adequate clinical material at its command, a university medical school should have its own hospital where a standard of care and attention of patients may be set for the community and for other charitable institutions. In this way, only, can the student of medicine by the instruction given receive the full benefit of each case.

*Second*—Salaried instructors for teaching in the several clinical subjects, a pathologist on such a salary to give his whole time, and sufficient clinical men to give at least one-half of their time to instruction.

To make a success of this department the university must place it on an equal plane with the other clinical department of the university. In making the instruction of both its San Francisco and Los Angeles clinical years the same, the university will be able to set the standard and control medical education of this great state of California and direct the medical teaching of the Pacific coast.

Respectfully submitted,

W. JARVIS BARLOW,  
Dean.

## MEDICAL DEPARTMENT IN SAN FRANCISCO

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SAN FRANCISCO, July 1, 1912.

*To the President of the University,*

SIR: I have the honor to present the following report of the College of Medicine of the University.

In the report of July 1, 1910, I expressed the opinion that among the most important needs of the college were the organization of the university hospital on a permanent basis and the adoption of a plan of growth whereby all the clinical departments ultimately might be placed on an academic plane. Both of these needs are now in a fair way of fulfillment. With the academic year 1912-13, the university enters on a new epoch in the history of its medical college. Professor Herbert C. Moffitt and a corps of assistants undertake to devote half of their time to teaching and scientific investigation in medicine; Dr. Wallace I. Terry and a group of assistants a similar service in surgery; while other instructors will maintain allied clinical departments on the same basis.

In the budget a specific appropriation of \$6,000 is made for the salaries of a professor of gynecology and obstetrics and of an assistant. The regents thus adopt a policy of including the clinical branches among academic activities, supporting them from the ordinary resources of the university. Clinical medicine in our university now ranks with the natural and physical sciences and with the subjects constituting the curricula of the colleges of culture.

Closely identified with the work of the university hospital there is to be a laboratory of applied pathology and experimental medicine. It will be under the direction of Dr. Jean V. Cooke, now instructor in pathology in Tulane University. He will be a most valuable addition to the staff of scientific investigators in



the university and his work will supplement and enrich the clinical output of the hospital.

After the earthquake and fire of 1906, the need for space for a hospital wholly controlled by the university made necessary the separation of the work of the first two and of the last two years in medicine. It became necessary to transfer the departments of anatomy, physiology and pathology to Berkeley, while the clinical subjects were still conducted in San Francisco. The separation made an unnatural division injurious to both parts. The board of regents has determined that ultimately all departments of the college shall be grouped together and in San Francisco. If the clinical departments were maintained in Berkeley, the fundamental sciences of physiology and pathology would have the advantage of a close alliance with physics and chemistry, anatomy would profit by association with biology, while the clinical departments would have the inspiration of an academic atmosphere. These advantages, however, seem to be out-weighted by the varied clinical opportunities afforded by a metropolitan community.

The location of San Francisco and its commercial relations to the Orient make it an ideal place for the establishment of a school of tropical medicine. Such a school will afford the finest opportunities for scientific research in medicine and the highest rewards in service to the state and to humanity.

In spite of abundant clinical facilities the state of California offers no opportunities for effective postgraduate training in the specialties of medicine. When the organization of the undergraduate courses shall be perfected, all on an academic plane, the university may well consider the establishment of departments in which students may be trained as expert practitioners in ophthalmology, otology, pediatrics, orthopedics, etc.

The progress of the college of medicine in our university in the last few years justifies the belief that its future as a scientific institution is secure.

Respectfully submitted,

A. A. D'ANCONA,  
Acting Dean.



## DEPARTMENT OF PHARMACY

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SAN FRANCISCO, July 1, 1912.

*To the President of the University,*

SIR: During the years 1910-12 the California College of Pharmacy has maintained its standards of the past, not only in regard to students numerically but also with regard to the quality of the work. The several chairs are well equipped. Each year it has been the endeavor of the directors to improve some special branch, thus offering better facilities for the teacher and student.

The allotment of land by the university for a botanical garden, together with gifts of money from our alumni association, will increase the efficiency of teaching in the branches of botany, pharmacognosy and materia medica. Instead of working with indigenous plants of no medicinal value the student will hereafter be able to dissect and observe the characteristics of both native and foreign plants of therapeutic use. This is necessary, for dried specimens are often so changed in appearance that it is difficult to study them to the best advantage.

Modern pharmacy has for its extremes the advanced scientific methods of manufacture, standardization and therapeutic valuation on the one hand with the crying commercial methods on the other. It is the aim of the college to encourage and maintain the serious study of pharmacy from the standpoint of usefulness in the cure of disease. This is our basal work; but naturally some of our graduates, following a natural bent, have specialized in various allied technical lines, such as chemistry, microscopy, bacteriology and the manufacture of serums and vaccines.

Like all colleges, we have wants: notably more extensive equipment in the pharmaceutical and chemical laboratories, and in the library. Judging from the past, we have reason to look forward to the realization of these acquisitions in the future.

Respectfully submitted,

FRANK T. GREEN,  
Dean.

## UNIVERSITY PRESS

BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: The activities of the University of California Press during the two years ending June 30, 1912, if measured in terms of the output of published papers, show a continued growth. There have been published during this period 164 papers in the various series issued by the university, not including the *University of California Chronicle*, the bulletins and circulars of the Agricultural Experiment Station, the administrative bulletins, syllabuses, and the like. The papers referred to totaled 6111 pages, with 288 plates, and represent an expenditure by the university of \$20,868.72 as the cost of printing. Of this amount \$14,507.05 came from the annually appropriated "Publications" budgets of \$9000 for 1910-11 and \$10,000 for 1911-12, and, with \$2385.65 from 1908-10 for work unfinished in that period, covered the cost of 120 papers, amounting to 5118 pages and 278 plates, in sixteen of the twenty-one series of *University of California Publications*; \$2800.77 came from the Lick Observatory budgets for 36 *Lick Observatory Bulletins*, and for part 4, concluding volume 9, of the *Lick Observatory Publications*; and \$1175.25 from the budgets of the Academy of Pacific Coast History for seven of its series of *Publications*. The volume of publication is an increase of more than fifty per cent over that of 1908-10.

The beginning of the new fiscal year finds 36 papers in the printer's hands, or ready to go to press, including five for the new Prize Essay series, and \$1245.07 has been spent from the 1911-12 budget towards the cost of this uncompleted work.

As noted above, the university is now issuing twenty-one series under the general title, *University of California Publications*, or twenty-eight in all, including the *Bulletin* and *Publications* of the Lick Observatory, the *Bulletin* and *Circulars* of the Agricultural Experiment Station, the *Library Bulletin*, the *University of California Chronicle*, and the *Publications* of the Academy of Pacific Coast History. These publications now have a fairly wide circulation. The exchange list now includes 1140 institutions to which one or more of the university's series are being forwarded, an increase of 208 since July 1, 1910, and the library's periodical list shows about 2300 titles of publications received in exchange. Owing to the wide free circulation of our publications in addition to the exchanges, the subscriptions and sales continue to be small in comparison, the amount received from these sources being \$2972.36 in the last two years.\* The greatest usefulness of the publications seems, however, still to be best served by their rather liberal circulation through free lists at the disposal of the departments and through the allotment of 200 copies to be distributed by the author. The total circulation of the average university series is at least as large as that of the average scientific journal published in the United States, or in Europe, and the facilities which the university's publications offer of bringing the results of research at the University to the attention of the scientific world, although not capable of being appraised in figures, must be counted of great value.

Several new series have been added. A series in history was established in September, 1910; and the first paper, Professor McCormac's "Colonial Opposition to Imperial Authority during the French and Indian War," was issued in November, 1911. In October, 1911, the *Bulletin of the Seismographic Stations* was established, and two bulletins have been issued. A prize essay series was added in March, 1912, and five papers are in press

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\* In addition to \$2972.36 noted above, \$1232.10 has been received from the sale of administrative bulletins (*Announcement of Courses*, *Alumni Directory*, and *Directory of Officers and Students*), \$207.93 from the Weinstock Lectures, \$956.39 from syllabi used in university courses, \$106.80 from the weekly *Calendar*, and \$182.83 from miscellaneous sources; the total amount received through the University Press was \$5658.41.

for the first volume. The first paper in the mathematic series, although the series was established in November, 1909, did not appear until June, 1912. A series in agricultural sciences was established in December, 1911, and one paper is now in press.

For the year 1911-12 the editorial committee of the Academic Senate was enlarged to nine members, thus securing a wider representation on the committee of departments interested in the university's publications. In addition to its routine duties of passing upon papers submitted for publication, the committee during the last two years has outlined, at the suggestion of the president of the university, a plan for a special series of publications for the semi-centennial celebration of the university in 1918; has given much time to the compilation of rules governing the "style" of printing, resulting in the adoption of a manual of style; and also after examination of many samples collected for testing and trial has adopted a paper for the publications which, it is hoped, will be found more attractive and lasting than that which has been used. The work of the committee, and of the university press, has been much facilitated by the conscientious attention of Professor J. C. Merriam to the many exacting requirements made of him as chairman of the Committee.

The recommendation has been made, with the endorsement of the editorial committee, that the direction of the university's exchanges be turned over to the library. The campaign to widen the exchange distribution of the university's publications has been most interesting work, and the growth of the exchange list from 451 addresses in June, 1906, to 1140 in June, 1912, is perhaps the best evidence of the attention given to this effort. But the continuing growth of the university's publishing activities seems to require that the manager of the university press should be able to devote more time to other things, and it is therefore to be hoped that the recommendation in regard to turning the exchanges over to the library can be carried into effect.

The printing office is still handicapped by lack of space and equipment, and some addition to the present building of that department is urgently needed to provide for expansion. The time required to put a publication of average size through the



press has become noticeably less than two years ago, but congestions still occur, and the consequent delays subtract from the possible value to the members of the faculty of our publication facilities. These conditions are in no way the fault of the superintendent of the printing office, Mr. J. W. Flinn, who has spared no efforts to meet the demands upon his equipment as promptly and efficiently as possible.

Respectfully submitted,

ALBERT H. ALLEN,  
Manager of the University Press.

## RECEIPTS FROM SALES OF PUBLICATIONS, 1910-12

American Archaeology and Ethnology ....	\$347.10	
Botany .....	70.98	
Classical Philology .....	10.84	
Economics .....	341.20	
Education .....	203.15	
Engineering .....	.10	
Entomology .....	.80	
Geology .....	413.57	
History .....	11.25	
Memoirs .....	545.11	
Modern Philology .....	79.21	
Pathology .....	69.85	
Philosophy .....	11.82	
Physiology .....	110.53	
Semitic Philology .....	30.30	
Zoology .....	119.49	
Miscellaneous .....	2.52	
		<hr/>
		\$2392.60
Lick Observatory Bulletin .....	\$18.90	
Lick Observatory Publications .....	62.25	
		<hr/>
		81.15
Library Bulletin .....		1.28
Publications Academy of Pacific Coast History ....		143.03
Graeco-Roman Archaeology (Tebtunis Papyri) ....		130.68
University of California Chronicle .....		223.62
		<hr/>
		\$2972.36
Announcement of Courses .....	\$612.37	
Alumni Directory .....	201.00	
Officers and Students .....	418.73	
		<hr/>
		\$1232.10
Weinstock Lectures .....		207.93
Syllabi .....		956.39
Calendar .....		106.80
Miscellaneous:		
Elementary Studies in English .....	.10	
English in Secondary Schools .....	\$21.95	
"Book of the Life of the Mexicans" .....	15.90	
Register .....	5.20	
State Geological Survey .....	34.50	
"Zoe" .....	62.75	
Sundries .....	42.43	
		<hr/>
		182.83
		<hr/>
		\$5658.41

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## DISTRIBUTION OF PUBLICATIONS

Series	Exchange	Dept.	Reviews	Subscr.	Others	Total
American Archaeology and Ethnology .....	279	100	26	16	47	468
Botany .....	355	22	31	14	51	473
Classical Philology .....	109	42	32	9	44	236
Economics .....	119	73	38	2	40	272
Education .....	124	6	24	6	35	195
Egyptian Archaeology .....	39	17	....	1	8	65 <sup>*1</sup>
Engineering .....	41	....	....	....	28	
Entomology .....	144	....	7	1	36	188 <sup>2</sup>
Geology .....	362	4	24	41	40	471
Greek and Roman Archaeology	41	....	....	1	8	50 <sup>*1</sup>
History .....	87	79	21	....	35	222
Library Bulletin .....	132	39	15	....	6	192
Lick Observatory Bulletins <sup>3</sup> ..	....	....	....	....	....	430
Mathematics .....	86	....	6	3	41	136
Memoirs .....	112	2	12	4	33	163
Academy of Pac. Coast Hist.	172	125	12	15	12	336
Modern Philology .....	104	33	28	3	16	184
Pathology .....	191	100	14	6	55	366
Philosophy .....	100	95	18	2	32	247
Physiology .....	276	....	15	18	38	347
Psychology .....	67	72	41	....	59	239
Semitic Philology .....	70	31	13	4	12	130
Zoology .....	393	65	29	12	69	568
U. C. Chronicle .....	295	....	....	104	94	493

(The totals do not include the possible circulation of 200 copies by authors).

Nothing has been published in the Education series since July, 1908; in the Engineering series since November, 1906; in the Entomology series since October, 1906.

\* Not including copies distributed by the publishers.

<sup>1</sup> Not including copies distributed by the Agricultural Experiment Station.

<sup>3</sup> Distributed mostly to the Observatory's mailing list of observatories and astronomical societies.

## SCRIPPS INSTITUTION FOR BIOLOGICAL RESEARCH

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LA JOLLA, July 1, 1912.

*To the President of the University,*

SIR: A memoir on the Institution was published in March of the present year.\* In view of the information thus made available the report now submitted may be restricted to a brief presentation of matters especially important at this moment.

The transfer of the "whole of the properties, rights, and privileges" of the Marine Biological Association of San Diego to the Regents of the University of California has recently been made. This was done in accordance with a resolution adopted by the Board of Regents on February 13, 1912, and with an empowering provision of the articles of incorporation of the association, and a resolution adopted at a special meeting of the Association held February 23, 1912. The actual taking over of the management of the institution and the change of name date from July 1, 1912, the beginning of the university's fiscal year.

The report of the special committee of the regents, consisting of President Wheeler and Regents McKinley and Earl (chairman of the Finance Committee), the approval of which by the board of regents constituted the acceptance of the institution by the university, contains the following: "The Regents of the University of California and the officers of the University appreciate fully the importance of the work being done at the

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\* The Marine Biological Station of San Diego, Its History, Present Conditions, Achievements, and Aims, by Wm. E. Ritter, Scientific Director. Univ. of Calif. Publ. in Zool., vol. 9, no. 4, pp. 137-248, pls. 18-24, and 2 maps, March 9, 1912. Persons desiring particularized knowledge about the Institution may obtain copies of this memoir by applying to the director at La Jolla, California.



Marine Biological Station of San Diego, and of the great value, present and prospective, of the properties acquired and held by your Association in connection therewith. . . . In the event that a transfer of the property is made by your Association to the Regents of the University of California, it will be accepted by the Regents of the University of California in trust for the following purposes:

“1. To become a department of the University co-ordinate with its already existing departments. . . .

“2. During the lifetime of Miss Ellen B. Scripps . . . the management and control of affairs of the Station and properties shall be in the hands of a local board at San Diego consisting of Miss Ellen B. Scripps, President Benjamin Ide Wheeler, E. W. Scripps, and William E. Ritter, and such other persons as may be mutually agreed upon by them, with authority to name an executive committee of three members.

“3. That . . . while the affairs of the Station are under the control of such local board, and thereafter, the Regents and officers of the University will use their best efforts to secure the largest possible State appropriations to promote the work of the Station.

“4. Whenever funds of the University are available for the purpose the same will be devoted to the work and development of the Station.

“5. The official designation of the Station shall be ‘The Scripps Institution for Biological Research of the University of California.’

“6. The Station and the properties of your Association will be accepted by the Regents of the University of California in trust for the purposes of making it, as a part of the University of California, an instrument for the most liberal biological research and the free expression and publication of the results of such research, as intended by the founders.”

This passage of the station from the hands of the Marine Biological Association of San Diego where it grew so well, into those of the regents of the University of California, to become an organic part of the university, and thus of the state of Cali-

fornia, may be reckoned as the passage from childhood to full-fledged youth; and it is confidently expected that an increased strength and usefulness similar to that which distinguishes the youth from the child, will mark the career of the station in the years of the immediate future.

One may hope that the dropping of the word "marine" from the name will not be taken to mean that a relinquishment or even curtailment of researches at sea is contemplated. The reason for the change was that those chiefly responsible for the enterprise, whether as financial supporters or essential custodians, had become fully convinced that biology in the largest sense ought to be the aim of this particular foundation. It is not to be supposed that anyone connected with the institution contemplates researches in the whole range of the sciences of organic being, particularly at any one time. It is believed, however, that an endowed institution with no specified limit of duration, ought to have the utmost freedom as to the particular provinces of the vast domain of biology that it should cultivate at different periods of its existence.

The word "research" was put into the new name not for the purpose of announcing a positive abandonment of all effort other than investigation in the narrowest, most rigorous sense; but rather from the mature conviction that whatever work may now or hereafter be taken up, should be based upon, and so subordinate, to research. Whether or not distinctly new researches will be inaugurated in the immediate future must depend entirely on the funds available for operating expenses. There can be no thought at present of diverting into new channels the working force and money devoted to the investigations which now are, and for several years have been under way. Both the results themselves and expressions of men of science in various parts of the world, indicate clearly that to do this would be a serious mistake.

Although it is unnecessary to set forth here, even in outline, either the results being reached by the Institution's programme of work, or the methods employed, I cannot forbear reference to the intelligence, skill, and devotion with which those primarily

responsible for the work at sea (Mr. W. C. Crandall, Captain of the *Alexander Agassiz*, Mr. E. L. Michael, and Dr. G. F. McEwen) have planned and executed the difficult tasks that have fallen to them during the last four or five years.

Owing to the fact that a pier sufficiently long to carry the salt-water in-take pipe well beyond the surf, and also for landing the collecting boats, is essential for operating the research aquaria; and the further fact that the building funds have so far been insufficient to meet the large expense of erecting such a pier, those aspects of the research programme dependent upon laboratory-aquarium experimentation have not been taken up. But the observational and statistical aspects of the program have thus far so fully occupied the time of the investigators that the absence of aquarium facilities has not seriously hampered the work. However the time is soon coming when the aquaria will be indispensable; and fortunately, again through the interest and generosity of Miss Ellen B. Scripps, the pier and salt water pumping plant will be provided, probably during the present summer and fall.

The time is also near at hand when the rooms in the laboratory building now occupied as a residence by the director's family will be needed for the purpose for which they were constructed—the scientific work of the institution. It will likewise soon be impossible or at least extremely detrimental to the work, for the members of the scientific staff to reside in La Jolla two miles away, and carry on their investigations at the laboratory. These difficulties can be overcome only by dwelling places on the institution grounds near the laboratory. Realizing this Miss Scripps has signified her readiness to provide the funds for the erection of the necessary residential quarters. This improvement will be begun as soon as a plan of procedure and necessary survey and laying out of the grounds can be accomplished.

One of the most serious handicaps on the work of the institution has always been the incompleteness of the library. This defect will now be remedied to a large extent, this item being one of those for which additional funds are to be provided by Miss Scripps.

The present moment when the institution is about to enter upon another period of physical development, and is passing under a new business management, seems opportune for repeating what I have said many times in the last two or three years, namely, that on the business side the institution will have, or ought to have, a large real estate enterprise on its hands in a few years. That the 170-acre tract of land owned by the institution may be made income-producing in the not distant future seems certain. In the memoir above referred to I have given at some length the grounds of belief in such a possibility. After calling attention to the great growth in population and wealth that has occurred in southern California, particularly along the ocean's edge, during the last two decades, I say: "Looking at the situation in the broadest way, taking account of physical, industrial, social, and intellectual tendencies and possibilities, as well as of the scientific purposes of the Station, it may be confidently held that every dollar put into the upbuilding of the institution as an instrument for scientific research and general enlightenment may be made to count also as investment for enlarging the income applicable to the scientific work."

The erection of a pier, and cottages near the laboratory as homes for those connected with the institution, will constitute an important step toward starting the colony on the land; and upon this income production must depend. This step having been taken, solution of the transportation problem would carry us well forward toward realizing the endowment value of the property.

The plan of non-resident members of the investigating staff has now been in vogue long enough to show somewhat definitely how it works. In the most favorable cases there can be no question about its advantageousness not only to the institution but likewise to the investigators. By this means an amount and a quality of service has been secured that with the present limited income, would have been otherwise impossible. The advantage to the investigators has been primarily in opportunities that would have been out of the question under any other conditions. The chance for a young scientist equipped and ambitious for research, but compelled to rely mainly on a teaching position



for his living, to associate himself with a research institution that can put into his hands some large problem with facilities for pursuing it year after year, is not likely to remain long ungrasped in a community where men of the sort indicated are found. Nor can the advantage to the schools with which such scientists are connected be inconsiderable if the relations are kept on a proper basis.

I have said that "in the most favorable cases" the non-resident scheme works well. The most favorable cases are those in which the non-resident is not located too far from La Jolla, and in which considerable of the work is of such a nature that the investigator may prosecute it at home in his own laboratory. Some of the problems upon which the institution is occupied are of such nature that little can be done upon them to advantage elsewhere than at La Jolla.

What attitude the institution should take on the question of making its facilities available to investigators not connected with any of its regular activities but who may wish to pursue their individual studies at La Jolla, has never been definitely formulated, but should be as soon as the aquaria are in operation and the problems of transportation and domicile at the institution are solved.

Similarly the question of provision for students who may wish to spend some time at the institution in preparation for their careers as professional scientists, should receive attention in the near future. This is particularly desirable as concerns students who, as candidates for higher degrees in the university, may wish to reside for a time at La Jolla.

As stated at the beginning, information regarding the institution's aims, general and special, its history and resources, the scientific results attained, its methods of work at sea, and details concerning apparatus, equipment, etc., may be obtained from the memoir there mentioned.

Respectfully submitted,

WM. E. RITTER,  
Director.



## SECRETARY OF THE REGENTS, 1910-11

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UNIVERSITY OF CALIFORNIA,

BERKELEY, July 1, 1911.

*To the Honorable Board of Regents  
of the University of California:*

GENTLEMEN: I have the honor of presenting the following  
Secretary's Report for the year ending June 30, 1911.

Respectfully submitted

VICTOR H. HENDERSON,  
Secretary of the Regents

## REGENTS OF THE UNIVERSITY, 1910-11

## REGENTS EX OFFICIO

HIS EXCELLENCY HIRAM WARREN JOHNSON (since January 2, 1911)  
 Executive Office, Sacramento  
*Governor, and President of the Regents ex officio*

HIS EXCELLENCY JAMES NORRIS GILLET (to January 2, 1911)  
 502 Crocker Building, San Francisco  
*Governor, and President of the Regents ex officio*

HON. ALBERT J. WALLACE (since January 2, 1911)  
 621 Union Oil Building, Los Angeles  
*Lieutenant-Governor*

HON. WARREN REYNOLDS PORTER (to January 2, 1911)  
 First National Bank Building, San Francisco  
*Lieutenant-Governor*

HON. ARTHUR H. HEWITT (since January 2, 1911) - - Yuba City  
*Speaker of the Assembly*

HON. PHILIP A. STANTON (to January 2, 1911)  
 202 Union Trust Building, Los Angeles  
*Speaker of the Assembly*

HON. EDWARD HYATT - - - - - Sacramento  
*State Superintendent of Public Instruction*

HON. A. LOWNDES SCOTT (since March 11, 1911)  
 Seventh and Townsend Streets, San Francisco  
*President of the State Agricultural Society*

HON. HENRY ALEXANDER JASTRO (to March 11, 1911)  
 1704 Nineteenth Street, Bakersfield  
*President of the State Agricultural Society*

RUDOLPH JULIUS TAUSSIG, ESQ., Main and Mission Streets, San Francisco  
*President of the Mechanics' Institute*

BENJAMIN IDE WHEELER, Ph.D., LL.D. - - - - - Berkeley  
*President of the University*

## APPOINTED REGENTS

The names are arranged in the order of original accession to the Board

	Term Expires
ISAIAS WILLIAM HELLMAN, Esq. - - - - - Wells, Fargo-Nevada National Bank, San Francisco	1918
CHESTER ROWELL, M.D. - - - - - Fresno Republican Building, Fresno	1926
CHARLES WILLIAM SLACK, Ph.B., LL.B. (to March 14, 1911) 504 Kohl Building, San Francisco	
JACOB BERT REINSTEIN, M.A. (died on April 16, 1911)	
JOHN ELIOT BUDD, A.B. - - - - - McDougald Building, Stockton	1916
MRS. PHOEBE APPERSON HEARST - - - - - Pleasanton, California	1914
ARTHUR WILLIAM FOSTER, Esq. - - - - - 1210 James Flood Building, San Francisco	1916
GARRET WILLIAM MCENERNEY, Esq. - - - - - 1277 James Flood Building, San Francisco	1920
GUY CHAFFEE EARL, A.B. - - - - - 233 Post Street, San Francisco	1918
JAMES WILFRED MCKINLEY, B.S. - - - - - 432 Pacific Electric Building, Los Angeles	1922
REV. PETER CHRISTOPHER YORKE, S.T.D. - - - - - 1267 Sixteenth Avenue, Oakland	1912
JOHN ALEXANDER BRITTON, Esq. - - - - - 445 Sutter Street, San Francisco	1914
FREDERICK WILLIAM DOHRMANN, Esq. - - - - - 201 Geary Street, San Francisco	1920
HON. THOMAS ROBERT BARD, resigned (to May 9, 1911) Hueneme, California	
FRANK SPAULDING JOHNSON, Esq. (died June 22, 1911)	
WILLIAM HENRY CROCKER, Ph.B. - - - - - Crocker National Bank, San Francisco	1924
TRUXTUN BEALE, LL.B. (since March 14, 1911) - - - - - Pacific Union Club, San Francisco	1926
PHILIP E. BOWLES, Ph.B. (since May 9, 1911) - - - - - 427 California Street, San Francisco	1922
CHARLES STETSON WHEELER, B.L. (since May 9, 1911) - - - - - Nevada Bank Building, San Francisco	1912

## OFFICERS OF THE REGENTS

HIS EXCELLENCY HIRAM W. JOHNSON - Executive Office, Sacramento  
*President*

VICTOR HENDRICKS HENDERSON, B.L.  
209 California Hall, University of California, Berkeley  
*Secretary and Land Agent*

ISAIAS WILLIAM HELLMAN, Jr., Ph.B. Union Trust Company, San Francisco  
*Treasurer*

FLETCHER A. CUTLER, ESQ. - 506 Crocker Building, San Francisco  
*Counsel*

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## STANDING COMMITTEES OF THE REGENTS FOR 1910-11

NOTE.—The President of the Board and the President of the University are members of all committees.

*Finance:* Regents CROCKER, EARL, BRITTON, FOSTER, JOHNSON (to June 22, 1911), and HELLMAN.

*Grounds and Buildings:* Regents BRITTON, Mrs. HEARST, DOHRMANN, REINSTEIN (to April 16, 1911), WALLACE (since May 9, 1911), and TAUSSIG.

*Agriculture:* Regents JASTRO (chairman, to March 11, 1911), SCOTT (chairman, since March 11, 1911), FOSTER (vice-chairman), BUDD, EARL, BARD (to May 9, 1911), and ROWELL (since May 9, 1911).

*Medical Instruction:* Regents REINSTEIN (chairman, to April 16, 1911), CROCKER (chairman, since April 16, 1911), BRITTON (vice-chairman), HYATT (since May 9, 1911), DOHRMANN, and EARL.

*Lick Observatory:* SLACK (chairman, to March 14, 1911), CROCKER (vice-chairman to and chairman from March 14, 1911), McENERNEY (vice-chairman, since March 14, 1911), BEALE (since March 14, 1911), and YORKE.

*Wilmerding School:* Regents TAUSSIG, EARL, SLACK (to March 14, 1911), and ROWELL (since March 14, 1911).

*San Diego Marine Biological Laboratory:* Regents McENERNEY, BARD (vice-chairman, to May 9, 1911), PORTER (to January 2, 1911), WALLACE (since January 2, 1911), and JOHNSON (vice-chairman, from May 9, 1911, to June 22, 1911).

*Executive Committee:* This committee consists of the chairmen of all the other committees.

## SPECIAL COMMITTEES OF THE BOARD

- To Nominate Standing Committees for 1911-12:* Regents BEALE, EARL, TAUSSIG, ROWELL, and WALLACE. (Appointed April 23, 1911.)
- To Prepare Resolutions in Memory of Regent Reinstein:* Regents MCENERNEY, JOHNSON, FOSTER, and BRITTON. (Appointed April 23, 1911.)
- To Draft Resolutions in Appreciation of Judge Cutler's Services:* Regents EARL, FOSTER, and TAUSSIG. (Appointed June 13, 1911.)
- To Consider a Plan of Holding a Conference in the Greek Theatre, at the time of the Panama-Pacific Exposition, on the Problems of Consular, Diplomatic, and other International Relations, the conference to be participated in by representative diplomatists, and others, authorities in international law and international affairs:* President WHEELER, Regent BEALE and Regent EARL. (Appointed June 13, 1911.)
- To Consider the Request of the San Diego Marine Biological Laboratory for a State Appropriation:* Regent EARL and President WHEELER. (Appointed February 14, 1911.)
- To Consider Establishing a College of Jurisprudence at Berkeley and to arrange Admission Requirements therefor:* Regents BUDD, MCENERNEY, MCKINLEY, REINSTEIN, BEALE, and EARL. (Appointed March 14, 1911.)



## ORDERS OF THE BOARD.

**Memorial Resolutions for Regent Reinstein:**

On May 9, the following resolutions were adopted, by a rising vote, in memory of Regent J. B. Reinstein, whose death occurred on April 16, 1911:

## IN MEMORIAM

“The Regents of the University of California record in the death of Jacob Bert Reinstein the passing of an able, energetic, far sighted, loyal, and high minded alumnus and Regent of the University and citizen of the State.

“To mention his services to the University would be to enumerate the things that have made the institution great. To whatever detail he lent his mind for the moment, it was all part of a comprehensive ideal toward which the University should be built. In this view, he was active as President of the Alumni Association in mobilizing and energizing that body in the service of their Alma Mater. In this view, he threw himself with such fervor into the athletic interests and other student activities that football seemed to be a passion of his. In this view, he organized the “Labor Day” project of the student body. In this view, he planned the devotion of a certain portion of the State appropriations for Scholarships, distributed among the Congressional Districts. In this same view, he suggested to Mr. Levi Strauss the institution of an equal number of scholarships supported by private generosity.

“The same motives and principles were at the bottom of his interest and activity in securing support from the State in varied legislation, especially the second one-cent tax. The same motives underlay his promotion of Farmers’ Institutes and the extension of the work of the College of Agriculture to the direct advancement of the interests of the State. The same motives, too, underlay his general support of the professional colleges, and, above all, his intelligent, patient and persistent devotion to the encouragement of medical education. It was with the same object that he became infatuated with the idea of providing a splendid architectural scheme for the appropriate housing of the University. If his most signal services are connected with the first presentation to the Regents of a comprehensive architectural plan, and then with the execution of the Phoebe A. Hearst Architectural Competition, they are, nevertheless, but parts of one large-

minded, far-sighted design for the development of the University to its utmost possibilities as representing the educational interests of the State.

“His attitude on all questions was statesmanlike. Every consideration was weighed by him in respect to its bearing on the interests of the Commonwealth. His two passions were the University of California and the City of San Francisco. But these to him were parts and agents and instrumentalities of the State. His ultimate thought always was, what would redound to the glory and honor of California.

“There was much that was grandiose in his view of things, that was dramatic in his action. Nothing was too magnificent or splendid for his conception. But behind his idealism, and the gorgeousness in which he loved to clothe his pictures, there was a practicality of means and methods of realization. He sketched his schemes in broad, comprehensive outlines and in alluring colors; he then filled in the details with utmost care and patience and toned down the color to suit the practical everyday purpose.

“In personal relations, he was the most loyal, affectionate, and dependable of friends. Whatever and whomever he loved, he loved utterly. Devoted himself to the public service, he demanded of whomever served the public in any capacity that he serve unselfishly and unsparingly. Keenly and painfully sensitive to criticism and misunderstanding, his comfort and encouragement came back to him from those who responded with like fervor to his ardent affection.

“(Signed) GARRET W. McENERNEY,  
FRANK S. JOHNSON,  
A. W. FOSTER,  
GUY C. EARL.”

#### **The Basis of Income Altered:**

The basis of the main support of the University of California was altered by the Legislature of 1911 by the substitution for the mill tax of a recurring annual grant, increasing each year for four years by an added seven per cent.

The “State University Fund” had consisted of a tax of three-tenths of a mill (that is, a tax of three cents on each \$100 of assessed valuation.) The financial committees of the Legislature were of the opinion that the change in the tax system of the

State (whereby the sources of State and local taxes had been separated, and the income of the State derived primarily from taxes on the gross earnings of corporations, the general property tax being left to the counties and municipalities), would probably result in unprecedentedly rapid increase of the total assessments of California property. They decided, therefore, to repeal the "three-cent tax law," and the Legislature adopted a law, approved April 25, 1911, among the provisions of which were the following: (See California Statutes and Amendments to the Codes, 1911, page 1104)

To provide for the permanent support and improvement of the University of California, there is hereby created an annual fund, to be called "The State University Fund." Said fund for the sixty-third fiscal year shall be equal to but not more than seven per cent in excess of the amount received by the University under the provisions of chapter three hundred and twenty-nine of the statutes of nineteen hundred and nine [law providing for the 3-cent tax] for the fiscal year ending June thirtieth in the year one thousand nine hundred and eleven, and provided further that such fund for each of the sixty-fourth, sixty-fifth and sixty-sixth fiscal years shall be equal to but not more than seven per cent in excess of the amount received by the University under this act for the immediately preceding respective fiscal year. . . . .

The money derived from said fund must be applied only to the support and permanent improvement of the University; provided, however, that not less than one-fourth of the said "State University Fund" shall, until the close of the seventy-first fiscal year, be placed in a fund to be known and designated as the Permanent Building Fund and which said fund must be devoted solely to the purposes of buildings and providing permanent improvements for the University. The Board of Regents must include in its biennial report to the Governor the statement of the manner and for what purpose all of the moneys referred to and raised under this act were expended.

The State University Fund, therefore, will increase for four years, as shown in the following table:

University year ending June 30	Amount
1911	\$710,773.55 (yielded by old 3-cent tax)
1912	760,527.70 (yielded under new law)
1913	813,764.63     "     "     "
1914	870,728.15     "     "     "
1915	931,679.12     "     "     "

**Organization of Various Departments in Groups:**

It was reported to the Board on February 14 that the various departments of the University were being organized in groups after the following order to facilitate and increase the efficiency of University administration:

- I. Philosophy and Education.
- II. Jurisprudence.
- III. History, Political Science, Economics.
- IV. Music, Architecture, Drawing.
- V. Greek, Latin, Indic, Semitic, Oriental Languages and Literatures.
- VI. English, German, French, Italian, Spanish, Slavic, Celtic Languages and Literatures.
- VII. Mathematics, Physics, Astronomy.
- VIII. Chemistry, Geology, Mineralogy, Geography.
- IX. Botany, Zoology, Physiology, Palaeontology, Hygiene, Anthropology, Anatomy, Pathology.
- X. Physical Culture, Military Science and Tactics.
- XI. Engineering.
- XII. Agriculture.

**Rules as to Automatic Increases in Salaries:**

On May 9 it was approved by the Regents that it be of record that with the adoption of the budget for 1909-10, the Regents inaugurated a system of automatic increases in salaries, whereby an instructor's salary is increased automatically \$100 per year from \$1000 up to \$1500, and the salaries of assistant professors \$100 per year from \$1600 up to \$2000; and that the automatic increases do not apply to members of the faculty below the rank of instructor, nor above the rank of assistant professor, and that there is no automatic increase after instructors have arrived at a salary of \$1500, and after assistant professors have arrived at a salary of \$2000; further, that increases are not automatic in the case of members of the faculty who are on part time only, as, for instance, certain members of the Department of Architecture and Law, nor in the case of the Affiliated Colleges, the Department of Agriculture, the Wilmerding School, etc.; nor in the case of instructors and assistant professors for a year of absence on leave, the two-thirds salary while on leave being normally based on the salary of the previous year, unincreased; and, further, that in-



creases may, of course, be given in the cases cited above, in which no automatic increase is due as of right. Larger increases than of \$100 are of course sometimes made at the discretion of the President, with the approval of the Regents.

**College of Jurisprudence:**

On March 14 it was reported to the Regents by the President that the Academic Senate in session on March 8, 1911, unanimously adopted and ordered transmitted to the Regents of the University the following resolutions presented by the University Council, a committee of the Senate:

(a) That a College of Jurisprudence be erected at Berkeley.

(b) That the admission requirements of the College of Jurisprudence include Senior standing in any undergraduate college of this University, or the equivalent thereof.

It was voted to refer this matter to the attorney members of the Board.

**Endorsement of Diplomas of Los Angeles Medical Department:**

In response to the request of the alumni of the Los Angeles Medical School that they be accepted as alumni of the University of California, although their degrees were recived before the existing Los Angeles Medical Department was a part of the University of California, it was voted on April 11 to authorize the President of the University and the Dean of the Los Angeles Medical Department to endorse upon the diplomas of recommended graduates of the medical college of the University of Southern California who received their degrees before the medical college of the University of Southern California was made a part of the University of California, a certificate of the fact that the medical college from which they received their degrees has subsequently become a part of the University of California as the Los Angeles Medical Department of the University of California; provided, that the faculty of the Los Angeles Medical Department shall recommend a list of persons whose diplomas should, in their opinion, receive such certification.



**Income Reduced by Mortgage Tax Amendment:**

The income of the University was reduced approximately \$25,000 per annum by the adoption of the constitutional amendment which provided that in all cases the land covered by a mortgage and not the mortgage itself should bear the taxes. Under the system previously existing the University could lend on mortgage at a rate which was a gross rate (including taxes) for the borrower, since the mortgage would exempt the land from taxation, and yet a net rate to the University, since the University mortgages were not taxed.

**Proposed California Institute of Technology:**

A bill was introduced before the Legislature of 1911 to provide for the creation and maintenance of the "California Institute of Technology," to be established in Southern California, and to receive tax support. The proposed institute would in most respects have been a duplication of the main portions of the University of California. Acting in pursuance of the advice of the chief educational experts of the United States, the Legislature rejected the bill.

On March 14 President Wheeler transmitted to the Board the following resolutions from the Academic Senate:

March 11, 1911.

*To the Honorable Board of Regents of the University of California:*

Whereas, the Academic Senate, consisting of all the faculties and instructors in the entire University, both in Berkeley and elsewhere, is authorized by section 18 of the Organic Act to memorialize the Board of Regents;

And whereas, Orders 166 and 167 of your honorable Board provide for communications to your Board from the Academic Senate,

The Academic Senate would respectfully call the attention of the Board of Regents to a bill now pending in the Legislature, looking to the establishment of a proposed California Institute of Technology, which institute is to conduct instruction of college grade in engineering, to confer academic degrees, and to have its own separate and independent governing board,

The Academic Senate views with grave apprehension such a departure from the practice hitherto existing in this state of placing all collegiate

instruction, conducted at the expense and in the name of the state, under any other board of control than the Regents of the University. The establishing of another board to supervise, in the name of the state, instruction in engineering will inevitably result in a double and variant standard of training for the engineering professions.

The Regents are at present supervising instruction and research in many parts of the state. The University is coterminous with the boundaries of the entire state, and unity of standard in university and collegiate instruction can alone be secured by the oversight of one governing board.

The spirit of the constitution, the history of higher education in this and other states lead us to believe that the present high standard of university instruction can be maintained only by continuing to place all university and college work for which the state is directly responsible, under one Board of Regents.

The Academic Senate, therefore, respectfully memorializes your honorable Board to take such action in this matter as may seem to it expedient.

Respectfully submitted,

(Signed) C. H. RIEBER,  
Chairman pro tem.

It was voted to refer the matter of the proposed Institute of Technology in Southern California to the Alumni.

#### **Amendments to Standing Orders of the Board:**

Amendments to the Standing Orders of the Board were adopted by the Regents during the year as follows:

Order No. 122.—Upon written approval of the Finance Committee the President and Secretary of the Board shall execute proxies for the Regents for the voting of stock owned by the Regents. Adopted Sept. 13, 1910.

Amendment to Order No. 21: Upon written authorization by the Finance Committee of the Regents, the Treasurer of the Regents is authorized to endorse for sale stocks owned by the Regents of the University of California. Adopted Sept. 13, 1910.

Order No. 46, reading as follows: "The Committee on Grounds and Buildings is authorized and empowered to amend or enlarge any contract made by it by authority of the Board. All such amendments or enlargements shall be reported to the Board for confirmation at the next regular meeting of the board thereafter," was amended on August 9 by the addition of the

following words: "Provided that extra orders for less than \$500 in amount may be executed by the Secretary upon approval of a requisition for the work, approved by the President, Secretary, and Chairman of the Committee on Grounds and Buildings, without the necessity of further action by the Committee on Grounds and Buildings or the Board."

On October 11 the following additional rule was adopted: No. 124: "Upon written authorization by the Finance Committee, the President and Secretary shall execute in behalf of the Regents of the University of California bonds required in connection with University business."

On March 14 it was voted that standing order No. 162, reading as follows: "The signatures of the President of the Board, of the President of the University, and of the Secretary, and the seal of the Regents of the University of California shall be placed on all diplomas," be amended by the omission of the word "Secretary," and the insertion of the words: "The dean of the college from which the student graduates, or when such college is without dean, then of the Dean of the Faculties."

On April 11, order No. 36, providing for the standing committees of the Board, was amended by the addition of the following committee: "On Audit, consisting of three appointed members, none of whom, however, shall be members of the Finance Committee."

On April 11 it was voted to amend order No. 46 by the addition of the following section, to be known as Section 46a: "All bills incurred by any Department of the University shall, before payment, receive the approval of at least two members of the Committee on Audit, which approval shall be endorsed upon the original invoice for payment, or upon such position of voucher blank as may be approved of by said committee. Payments by the Secretary and by Heads of Departments out of revolving or contingent funds shall be continued as heretofore, but the reimbursement of such funds by checks drawn upon the Treasurer shall be approved in the manner heretofore stated for approval of invoices."

#### **Recorder Authorized to Sign Documents in the Secretary's Absence:**

On June 13 it was approved that the Recorder of the Faculties be authorized to sign documents requiring the signature of

the Secretary of the Board of Regents at such times as the Secretary may be absent from the University, this to be contingent each time upon the written approval of the President of the University and of the chairman of the Finance Committee for a specific period.

**Adoption of New University Seal:**

A new University Seal was adopted by the Regents on August 9. The new seal designed by Tiffany & Company of New York, is as follows:



**Gymnasium and Infirmary Fee:**

On April 11, on President Wheeler's recommendation, it was voted that the Infirmary and Gymnasium fee should hereafter be \$5, instead of \$4, of this \$3 to be credited to the Infirmary and \$2 to the Gymnasium fees.

**Students' Observatory Fee:**

On May 9, on President Wheeler's recommendation, it was voted to charge a fee of \$2.50 per half year to undergraduate students in the Students' Observatory.

**Lot on Piedmont Avenue Site for Women's Dormitories:**

On April 11 it was voted that the Palmer lot on Piedmont Avenue should be regarded as a site for future dormitories for the women students of the University.

**Testing Laboratory in Civil Engineering Department:**

It was voted on November 8 that a testing laboratory be made a part of the work of the Department of Civil Engineering, subject to the following provisions:



(a) That the work take the form of research, no tests of a merely routine nature, such as could be procured from existing business firms, being made.

(b) That the moneys received for tests go directly to the University for the support of the testing laboratory, laboratory assistants being paid for their services at definite rates per hour or month, and no salaried instructor receiving compensation for such work.

(c) That every precaution be taken to prevent the use of the University's name for advertising purposes.

**Musical and Dramatic Committee:**

On May 9 it was voted to provide a revolving fund of \$3000 for Professor William Dallam Armes as Chairman of the Musical and Dramatic Committee, and that all disbursements in connection with musical and dramatic events conducted by this committee of the faculty should be made through the regular mechanism of the University.

**Cash Receipts of University Farm to be Deposited at Davis Bank:**

On December 22 the following resolution was adopted:

*“Resolved, that cash receipts at the University Farm at Davis shall be deposited with the Davis branch of the Bank of Yolo of Woodland to the account of the Regents of the University of California, such funds to be withdrawn by the Treasurer of the Regents at his discretion.”*

**Finance Committee Authorized to Make Collateral Loans in 1911:**

On December 22 the Finance Committee was authorized to make loans on collateral security during the year 1911.

**Regents to Meet at San Francisco Institute of Art:**

On January 10 it was voted that the meetings of the Regents should thereafter be held at the San Francisco Institute of Art, instead of at the Crocker Building.

**Accumulated Interest of Wilmerding School Added to Endowment:**

On October 11 it was voted to add to the endowment of the Wilmerding School, as recommended by the Committee on Wilmerding School, \$15,000 of the \$23,666.59 of accumulated inter-



est on hand in the Wilmerding Endowment fund interest account on July 1, 1910, with the understanding, however, that the Wilmerding School Committee may hereafter withdraw portions of this \$15,000, if necessary, for use toward the completion and equipment of the new Wilmerding School building, now being constructed by the boys of the school.

**Estate of Mr. M. Theo. Kearney:**

On August 9 it was reported that final distribution had been granted to the Regents of the Estate of Mr. M. Theo. Kearney of Fresno, and that the entire inheritance received from Mr. Kearney had been entered in the books as of a net value of \$1,000,000. This bequest was of 5400 acres of land, three miles from Fresno, including 820 acres of vineyard, 200 acres of ornamental grounds, a commodious residence, fine equipment of packing houses, barns, stables, workmen's dormitories, and workmen's cottages, pumping plant, sanitary system, shops, etc.

**Offer to Purchase Chicago Property Rejected:**

On May 9 it was voted to reject the offer of Mr. C. C. Heisen to purchase the lot on Dearborn Street in Chicago, bequeathed to the University by Mrs. Jennie D. Thompson, since Mrs. Thompson's will enjoins and directs the Regents not to sell this land before the expiration of the existing ninety-nine year lease.

**\$5000 from General Fund Placed in Mills Endowment:**

On September 13 it was voted to take \$5000 from the General Fund and place it in the Mills Endowment, this representing the salary for the Mills professorship, vacant since June 30, 1909.

**Dental Department Surplus Made into an Endowment:**

It was voted on September 13 that \$4367.32, the Dental Department surplus for 1910, should be made an endowment for the Dental Department.

**Contracts for Library and Boalt Hall Furnishings:**

On January 10 the Committee on Grounds and Buildings was authorized to award contracts for the furnishings for the new

University Library and Boalt Hall, as a charge against the respective appropriations therefor from the Permanent Building Fund, and the President and Secretary of the Board were authorized to execute such contracts as might be approved by the Committee on Grounds and Buildings for this work.

**Women's Senior Hall:**

On June 13, the President and Secretary of the Board were authorized and directed to execute such contracts for Women's Senior Hall, in accordance with the plans drawn by Miss Julia Morgan, as may be approved by the Committee on Grounds and Buildings and the Finance Committee, and these committees were empowered to advance not to exceed \$1500 to the Associated Women Students, over and above the moneys, approximately \$3300, which the women students had already raised, subject to the understanding that such advances were to be made only upon proper guarantee being given by the Associated Women Students for the repayment of money so advanced.

**Track in Strawberry Cañon:**

On March 14 it was voted to grant permission to the Associated Students, revocable at will, to build, at their own expense, a track in Strawberry Cañon in the region between the Palmer House and the Dairy Barn, subject to approval by the Regents of the choice of the architect and of the preliminary and the final plans, and provided that the track cross the creek on bridges, and that the stream bed be not graded full but left as an open creek.

**President's House Furnishings:**

On January 10 it was voted to appropriate \$12,000 from the Permanent Building Fund for furnishings for the new President's House, and the Secretary was authorized to pay such bills in this connection as might be approved by the President of the University.

**Electricity for President's House:**

On January 10 it was voted that the President's House should be connected with the University electrical plant and current supplied at the expense of the University.

**Street Work at Affiliated Colleges:**

On March 14 it was voted to refuse to pay the bills presented by the Raisch Improvement Company for street work done by them adjoining the Affiliated College grounds, inasmuch as this work was done without preliminary consent of the Regents, and inasmuch as the Regents are not liable for street work affecting property owned by the Regents and used for educational purposes.

**Alterations of Los Angeles Medical Department Buildings:**

On June 13 power to act was granted to the Committee on Grounds and Buildings and to the Finance Committee, subject to approval of the Attorney of the Regents as to due accordance of action taken with the provisions of the Legislative act, to proceed with the alterations in the buildings of the Los Angeles Medical Department, the cost of such changes to be kept within the \$25,000 appropriation made by the Legislature.

LEASES

During the year leases were approved by the Board as follows :

Lessee	Property	Term	Total Amount
H. F. S. Hooper	House and contents situated on Lot "A," Block 7, Oceanside, San Diego County.	July 5, 1910, to July 5, 1911	\$150.00
S. B. Sumner	E. ½ of Sec. 6, T. 28 S., R. 18 E., M. D. M.	Nov. 1, 1910, to Nov. 1, 1911	20.00
Frank C. Sloan	214.48 acres in San Mateo County.	Sept. 15, 1910, to Sept. 15, 1915	6,230.00
R. F. Morrow	Lick Observatory lands in Secs. 8, 9, 16, and 17 in Township 7 South, Range 3 East, M. D. M.	Mar. 1, 1911, to Mar. 1, 1914	240.00
Frank Schmidt	Three lots on Seventh and Holyoke streets, West Berkeley.	Revocable at will	4.00 per annum
R. L. Guy	Palmer House on Piedmont avenue.	Aug. 1, 1911, to Aug. 1, 1912	600.00
Various tenants.	Parcels of alfalfa and pasture land of the Kearney Estate in Fresno County.		

## CONTRACTS

During the year building work contracts were approved by the Board as follows:

Contract	Account to which chargeable	Contractor	Contract Price
Agriculture Hall:			
Steel erection,	Permanent Building Fund,	C. A. Blume Construction Co.,	\$2,950.00
Structural steel,	Permanent Building Fund,	Ralston Iron Works,	21,923.00
Granite work,	Permanent Building Fund,	California Granite Co.,	42,300.00
Excavation and concrete,	Permanent Building Fund,	Clinton Fireproofing Co.,	36,970.00
Plumbing,	Permanent Building Fund,	Wm. F. Snook & Son,	10,737.00
Carpentry and mill work,	Permanent Building Fund,	J. C. Nielson,	22,000.00
Furring, lathing and plastering,	Permanent Building Fund,	Wm. Makin,	18,354.00
Marble and terrazzo,	Permanent Building Fund,	Mission Marble Co.,	2,465.00
Heating and ventilating apparatus,	Permanent Building Fund,	Mangrum & Otter,	6,455.00
Roofing and sheet metal work,	Permanent Building Fund,	Guilfoy Cornice Co.,	13,765.00
First Street Building (for Blake, Moffitt, & Towne):			
Piling,	First Street Building,	Mercer-Fraser Co.,	2,521.00
Excavations, foundations, reinforced concrete, and carpentry,	First Street Building,	Standard Construction Co.,	51,636.00
Plastering,	First Street Building,	A. Knowles,	2,585.00
Marble and terrazzo,	First Street Building,	Vermont Marble Co.,	456.00
Glazing,	First Street Building,	W. P. Fuller & Co.,	1,300.00
Roofing and sheet metal work, fire-proof doors and windows,	First Street Building,	Fordeur Cornice Works,	4,300.00
Vault doors,	First Street Building,	Herring, Hall, Marvin Safe Co.,	400.00
Sidewalk lights,	First Street Building,	Berger Manufacturing Co.,	448.00
Ornamental Iron work,	First Street Building,	California Artistic Metal and Wire Co.,	4,920.00
Painting,	First Street Building,	D. Zelinsky	765.00
University Library:			
Painting and decorating,	Doe Bequest,	J. Llewellyn Co.,	8,500.00
Steel furnishings,	Permanent Building Fund,	Art Metal Construction Co.,	54,832.00
Card cabinets,	Permanent Building Fund,	A. J. Forbes & Son,	4,315.00
Table lamps, etc.,	Permanent Building Fund,	Adams & Holloper,	3,616.00
Isirian marble for loan desk,	Permanent Building Fund,	Mission Marble Works, (per cu. ft.)	5.25
Carving and setting in place the loan desk, three marble benches for the vestibule and stair landing, and four marble bases for the vestibule lamps,	Permanent Building Fund,	J. Schoenfeld,	2,582.00

Contract	Account to which	Contractor	Contract
Price	chargeable		Price
Steel shelving for University Press room and five additional bookstacks, University Library and Boat Hall: Tables and various cases and cabinets, Chairs, Lighting fixtures, Boat Hall: Steel book stack, Five settles for the basement and five desks for the studies, Lighting fixtures, Linoleum floor covering, President's House: Roads and walks, Painting and decorating interior, Class of 1910 Bridge: Swimming pool in Strawberry Cañon:	Permanent Building Fund,  Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Permanent Building Fund, Donations by Class of 1910 and Mrs. Hearst, Students' Gymnasium Fees,  University Farm Buildings, Wilmerding School,  Tompkins Fund,  Permanent Building Fund,  Funds donated by the Asso- ciated Women Students,	Van Dorn Iron Works,  A. J. Forbes & Son, Whitaker & Ray-Wiggin, Thomas Day Co.,  Art Metal Construction Co., Rucker-Fuller Desk Co.,  Adams & Holloperter, D. N. & E. Walter,  Pringle, Dunn & Co., J. Llewellyn Co., H. F. Sorensen,  San Francisco Fireproofing Co., (assigned to Contra Costa Construction Co.)  Lee M. Vance,  Stanley J. Fay,  Hutchinson Co.,  Contra Costa Construction Co.,  William Bruce,	3,125.00  16,563.25 7,503.23 907.00  9,600.00 870.00  4,800.00 1,596.70  8,450.00 1,950.00 1,150.00  14,268.00  1,512.50    1,662.50  33,100.00   3,499.00



**Contracts for First Street Building:**

On September 13 the President and Secretary of the Board were authorized and directed to execute such contracts as might be approved by the Finance Committee for the erection of a reinforced concrete building for Messrs. Blake, Moffitt, and Towne on the lot on First street, San Francisco, held by the Regents as an investment.

**Exchange of Stock in San Francisco National Bank for Stock of Bank of California:**

On August 9 the Treasurer was authorized to endorse for the Regents of the University of California, for transfer, their stock in the San Francisco National Bank. On October 11 it was reported to the Regents that two hundred shares of stock in the San Francisco National Bank had been exchanged for \$7500 and one hundred shares of stock of the Bank of California, par value \$10,000. This stock was entered in the books of the University at a valuation of \$20,550.00.

**Contract for 1910 Raisins of Kearney Vineyard:**

At the meeting of the Regents on September 13, 1910, the Regents ratified a contract with the J. K. Armsby Company, whereby the 1910 Muscat raisin crop of the Kearney Vineyard was sold to the J. K. Armsby Company at  $3\frac{1}{2}$ c a pound, f.o.b. cars, Kearney Park, Fresno County. The J. K. Armsby Company refused to take the raisins, declaring that they were not "standard" within the meaning of the contract. The Regents had the raisins examined by some twenty different persons familiar with the raisin industry. All pronounced the raisins "standard" and as of good quality. Not wishing to engage in litigation over the matter, the Regents consented to an abrogation of the Armsby contract, after the J. K. Armsby Company had agreed to pay certain expenses which had arisen in connection with the dispute. The raisins were immediately thereafter sold to the Fresno Home Packing Company at  $3\frac{1}{4}$ c per lb., f.o.b. cars, Kearney Park, a price which was approximately half a cent a pound above the price at the time prevailing. This excess above

the prevailing market price represented the purchasers' opinion of the superiority of the raisins grown and dried at the Kearney Vineyard to the general average of California raisins.

**Permission to Judge Cutler to Visit Kearney Vineyard:**

Upon request of Judge F. S. Cutler, retiring attorney of the Regents, on June 13 permission was granted him to visit at any time the Kearney Vineyard.

**Contract for Military Uniforms for 1911-12:**

On April 11 it was voted that the contract for military uniforms for the year ending June 30, 1912, be awarded to C. J. Heeseman, Inc., the lowest bidder, at a cost of \$18.95 for the complete uniform.

**No Insurance to be Carried on Los Angeles Medical Department Properties:**

On February 14 it was voted that no insurance should be carried on the properties of the Los Angeles Medical Department, since the University looks to the state to replace any University property destroyed by fire. This action was taken in pursuance of the precedent whereby on May 10, 1910, it was voted to discontinue insurance on the property of the Medical Department in San Francisco and Berkeley.

**Buildings for University Farm:**

On May 9 it was voted to apportion the State appropriation of \$65,000 for building operations at the University Farm as follows:

Dormitory .....	\$33,000	
Poultry Husbandry .....	7,000	
Hog barns .....	5,000	
Cottage for the farm foreman .....	3,000	
Reserve:		Approx.
Architects' fees .....	\$2,500	
Superintendence and advertising .....	1,500	
Corrals and other fencing .....	2,000	
Painting, repairs, and building emergencies .....	11,000	17,000
		<hr/>
		\$65,000

**Architects for University Farm Building Operations:**

On May 9 it was voted to employ Messrs. Cunningham & Politeo as architects for the new structures to be erected at the University Farm.

**Hog Serum Laboratory:**

The preparation of serums or vaccines to produce immunity in hogs against hog cholera was a task laid upon the University by the Legislature of 1911, by an act approved April 21, 1911 (California Statutes, 1911: p. 1064). A laboratory for this purpose was established by the University in Strawberry Cañon and the serum is now being widely distributed throughout the State, at the cost of production.

**Hog Cholera Investigations:**

It was voted on May 9 to proceed at once with the hog cholera investigations intrusted to the Regents by the Legislature at its last session, and that the necessary expenditures be made at once, even though the money would not be available to be drawn upon until June 28.

**Insecticide Inspection:**

Inspection of insecticides and fungicides manufactured or sold in California was entrusted to the University by the Legislature by an act approved May 1, 1911 (California Statutes 1911: p. 1248) just as already the University inspects commercial fertilizers. This work is done under the charge of the Department of Entomology. The cost is defrayed by a fee required of applicants for registration for insecticides.

**Sale of Improvements at Petaluma Poultry Experiment Station:**

On June 13 it was voted to sell the improvements at the former Petaluma Poultry Experiment Station, which are situated on land which has reverted to Mr. George P. McNear, to Mr. McNear at \$500.

**Plans for Agricultural Investigations in Southern California:**

The plan for agricultural investigations for the year ending June 30, 1912, as formally adopted by the Regents, is set forth

in the following letter of June 30, 1911, to President Wheeler from Professor E. J. Wickson, Director of the Experiment Station:

In accordance with the law establishing the Southern California Pathological Laboratory and Citrus Experiment Station of the University, I submit for your approval and for adoption by the Board of Regents, the following outline of work during the fiscal year 1911-12:

1. We shall proceed to secure the new and extended facilities for work generously made by the Legislature of 1911, to wit:

(a) Purchase of land and erection of buildings at the River-side Citrus Experiment Station, etc. ....	\$25,000
(b) Enlargement of Laboratory at Whittier.....	4,000
(c) Heating Furnace, Laboratory at Whittier.....	400
(d) Barn and Workshop, Laboratory at Whittier.....	1,000
(e) Laboratory Equipment at Whittier.....	2,000

These sums are in addition to the customary legislative appropriation for maintenance and will provide greatly needed opportunities for developing undertakings now in progress and for taking up some new lines.

2. As a branch of the work of the Southern California Pathological Laboratory and Citrus Experiment Station of the University, the Legislature of 1911 appropriated \$1500 for two years for the extension of research and experiment in the Imperial Valley. This was made on the basis of satisfactory service rendered under the appropriation of \$6,000 by the Legislature of 1909, of which the results have been published. This extended study of the peculiar agricultural conditions and problems of the Colorado River district will begin at once.

3. Work will be continued upon the "Brown Spot of the Orange" in an endeavor to obtain further knowledge in regard to the cause and means of control of this very obscure and troublesome disease.

4. Investigations will be carried on upon a considerable scale in connection with the various more obscure diseases causing the deterioration of lemons. Such troubles as the "Red Rot," "Black Spot," "Pitting," and other similar effects upon the rind of the fruit will receive attention. Also certain fungus decays which are not yet thoroughly understood, particularly those caused by the so-called "Cottony Fungus" of the form known as "Gray Rot."

5. Our investigations concerning the English Walnut, which have gone on for several years, will be continued, particularly along the line of developing and testing new varieties. In this work the object has been to obtain varieties more or less immune to the walnut blight and also having desirable commercial qualities.



6. Other plant disease investigations will take up the matter of vegetable diseases, particularly those affecting the tomato, sweet potato, and watermelon.

7. Study will be continued upon the "Crown Gall," one of the most serious diseases affecting fruit trees in this State. Such work will consist both in the study of the organism causing the trouble and its relation to various trees, and also work from the nurseryman's standpoint in connection with the possibility and feasibility of growing trees immune to these diseases.

8. In Entomology work will be continued along the line of special studies upon citrus tree insects.

9. In Pomology considerable work is under way in connection with improving fruit varieties by selection, particularly in the case of citrus fruits, and also in introducing and propagating desirable new fruits for Southern California.

10. Investigations are also being conducted upon the life history of our citrus fruits in connection with various questions affecting the development and nature of the fruit. It is proposed, during the coming year, to commence a special investigation of the relation of the citrus tree to soil conditions as affecting the health of the tree and the production of the fruit. This study will be carried on partly from the standpoint of the soil and partly from that of the tree. It will therefore involve the services on the one hand of the Soil Chemist, Physicist, and Bacteriologist and on the other hand that of the Plant Physiologist.

11. There will also be continued soil investigations already under way in regard to soil fertility and treatment. This concludes the list of specific objects of investigation, but in addition to these the Southern California Stations will continue as in the past to carry on a large amount of other work of a routine or general nature in the way of minor investigations, field studies, and examinations, and handling of correspondence.

#### **Examiners for the Registration of Nurses:**

On August 9 the existing members of the Board of Examiners for the registration of nurses were continued in service for a year from August 10, 1910. These members were as follows:

- Dr. G. F. Reinhardt, Chairman.
- Miss Theresa McCarthy, San Francisco.
- Dr. Helen Criswell, San Francisco.
- Dr. Henry G. Brainerd, Los Angeles.
- Mrs. Charles D. Lockwood, Pasadena.
- Miss Margaret Pepoon, San Diego.
- Mrs. W. E. Downing, Vallejo.



## DEGREES, SCHOLARSHIPS, AND MILITARY COMMISSIONS

**Degrees.**—For a complete list of the degrees conferred on May 17, 1911, see the University of California Register for 1910–11.

**Scholarships.**—For a list of the recipients of scholarships for 1910–11, see the University of California Register for 1909–10.

For a list of the scholarships for 1911–12, see the University of California Register for 1910–11.

**Military Commissions.**—For a list of the recipients of military commissions for 1910–11, see the University of California Register for 1910–11.

**University Medal.**—The University Medal for 1911, on recommendation of the Academic Council and by vote of the Regents, was conferred upon Walter Colton Little, Jr.

## SECRETARY OF THE REGENTS, 1911-12

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UNIVERSITY OF CALIFORNIA,

BERKELEY, July 1, 1912.

*To the Honorable Board of Regents  
of the University of California:*

GENTLEMEN: I have the honor of presenting the following  
Secretary's Report for the year ending June 30, 1912:

Respectfully submitted,

VICTOR H. HENDERSON,  
Secretary of the Regents

## REGENTS OF THE UNIVERSITY, 1911-12

## APPOINTED REGENTS

The names are arranged in the order of original accession to the Board

	Term Expires
ISAIAS WILLIAM HELLMAN, Esq. Wells, Fargo-Nevada National Bank, San Francisco	1918
DR. CHESTER ROWELL, M.D. (died May 23, 1912) Fresno Republican Building, Fresno	
JOHN ELIOT BUDD, A.B. McDougald Building, Stockton	1916
MRS. PHOEBE APPERSON HEARST Pleasanton, California	1914
ARTHUR WILLIAM FOSTER, Esq. 1210 James Flood Building, San Francisco	1916
GARRET WILLIAM MCENERNEY, Esq. 1277 James Flood Building, San Francisco	1920
GUY CHAFFEE EARL, A.B. 233 Post Street, San Francisco	1918
JAMES WILFRED MCKINLEY, B.S. 432 Pacific Electric Building, Los Angeles	1922
JOHN ALEXANDER BRITTON, Esq. 445 Sutter Street, San Francisco	1914
FREDERICK WILLIAM DOHRMANN, Esq. 201 Geary Street, San Francisco	1920
WILLIAM HENRY CROCKER, Ph.B. Crocker National Bank, San Francisco	1924
TRUXTUN BEALE, LL.B. Pacific Union Club, San Francisco	1926
PHILIP E. BOWLES, Ph.B. (since May 9, 1911) 427 California Street, San Francisco	1922
CHARLES STETSON WHEELER, B.L. Nevada Bank Building, San Francisco	1928
JAMES K. MOFFITT, B.S. (since July 12, 1911) First National Bank, San Francisco	1924
REV. CHARLES A. RAMM, B.S., M.A., S.T.B. (since March, 1912) 1100 Franklin Street, San Francisco	1928

## OFFICERS OF THE REGENTS

HIS EXCELLENCY HIRAM WARREN JOHNSON - Executive Office, Sacramento  
*President*

VICTOR HENDRICKS HENDERSON, B.L.

209 California Hall, University of California, Berkeley  
*Secretary and Land Agent*

RALPH PALMER MERRITT, B.S.

220 California Hall, University of California, Berkeley  
*Comptroller*

ISAIAS WILLIAM HELLMAN, Jr., Ph.B., Union Trust Company, San Francisco  
*Treasurer*

WARREN OLNEY, Jr., A.B., LL.B.

1107 Merchants Exchange Building, San Francisco  
*Counsel*

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## STANDING COMMITTEES OF THE REGENTS FOR 1911-12

*Finance:* Regents EARL, FOSTER, BRITTON, C. S. WHEELER (to September 12, 1911), MOFFITT (since September 12, 1911), TAUSSIG, and as Member Emeritus, Regent HELLMAN.

*Grounds and Buildings:* Regents BRITTON, Mrs. HEARST, DOHRMANN, BOWLES, WALLACE to September 12, 1911), and C. S. WHEELER (since September 12, 1911).

*Audit:* Regents DOHRMANN (chairman to August 8, 1911), SCOTT, and BOWLES; and, as alternate members (since October 4, 1911), Regents BEALE and C. S. WHEELER. This committee was dissolved on November 20, 1911.

*Agriculture:* Regents SCOTT, FOSTER, ROWELL (to May 23, 1911), HEWITT, and WALLACE (since September 12, 1911).

*Medical Instruction:* Regents BRITTON (chairman to September 12, 1911), MOFFITT (chairman since September 12, 1911), CROCKER, DOHRMANN, Mrs. HEARST, and ROWELL.

*Lick Observatory:* Regents BEALE, McENERNEY, YORKE (to March, 1912), RAMM (since March, 1912), BUDD, and CROCKER.

*Wilmerding School:* Regents TAUSSIG, EARL, and CROCKER.

*San Diego Marine Biological Laboratory:* Regents MCKINLEY, WALLACE, and HYATT.

*Executive Committee:* This committee consists of the chairmen of all the other committees.

## SPECIAL COMMITTEES OF THE BOARD

- To consider a scheme of holding a conference, in the Greek Theatre, at the time of the Panama-Pacific Exposition, on the problems of consular, diplomatic, and other international relations, the conference to be participated in by representative diplomatists, and others, authorities in international law and international affairs: President WHEELER, Regents BEALE and EARL. (Appointed June 13, 1911.)*
- To draft resolutions in honor of Judge Cutler's services: Regents EARL, FOSTER and TAUSSIG. (Appointed August 8, 1911.)*
- To draft memorial resolutions in honor of Regent Frank S. Johnson: Regents MCKINLEY, BRITTON, and CROCKER. (Appointed August 8, 1911.)*
- To confer with Mr. E. W. Scripps and Miss Ellen B. Scripps in regard to the relation of the San Diego Marine Biological Laboratory to the University: President WHEELER and Regents EARL and MCKINLEY. (Appointed December 22, 1911.)*
- To draft memorial resolutions in honor of Mrs. Jane K. Sather: Regents EARL, MOFFITT, and ROWELL. (Appointed February 13, 1912.)*
- To formulate an agreement with Professor John Galen Howard in regard to architectural relations with the University: Regents BRITTON, EARL, and WHEELER. (Appointed March 14, 1912.)*
- To nominate standing committees for 1912-13: Regents EARL, MOFFITT, BEALE, TAUSSIG, and BRITTON. (Appointed March 14, 1912.)*
- To draft memorial resolutions in honor of Regent Chester Rowell: Regents BRITTON, EARL, and FOSTER. (Appointed June 3, 1912.)*



## ORDERS OF THE BOARD

**Resolutions in Honor of Regent Frank S. Johnson:**

On September 12 the following resolutions in honor of Regent Frank Spaulding Johnson were adopted by the Board:

WHEREAS: In the death of their colleague, Frank Spaulding Johnson, The Regents of the University of California have suffered the loss of a fellow-worker enthusiastic in his attitude toward the University, loyal and devoted in his endeavor for its advancement, and untiring in its service, now therefore, be it

*Resolved*, That The Regents of the University of California express their sorrow at this loss and their grateful recollection of a service to the University which was intelligent, earnest and warm-hearted.

**Resolutions in Honor of Regent Chester Rowell:**

On June 11 the following resolutions in honor of Regent Chester Rowell were adopted by the Board:

WHEREAS, in the death of Dr. Chester Rowell, the University of California has suffered an irreparable loss, now, therefore, be it

*Resolved*, That the Regents of the University of California hereby express their sorrow at the death of an honored and beloved friend and at the bereavement which has befallen the whole community. Wise in council, warm in heart, loyal to ideals that he strove to realize in the varied institutions of human society, active in all that makes for the common good, he was a fit exemplar to youth of a life well spent. He was a man whose rich and varied intellectual equipment and intellectual activity were always at the service of the community. In public life he was patriotic, courageous, and effective, leader of ideals and soundly constructive in accomplishment. In the practice of the healing art, his zeal for knowledge, his ripe wisdom of experience, and his skill of judgment and of use were lavished in a spirit of unselfish service. Unsparing of risk, weariness, and toil his labors were characterized by self-denying zeal and by the generous and kindly affection of a father. Full of years and honors, rich in the love of his neighbors and his associates, free to shape his days as he might choose, he sought not ease, but only new opportunity for understanding of human ways and human needs, and new opportunity for self-forgetful service to his fellow men.

**Death of Professor George Davidson:**

On December 22 President Wheeler reported to the Regents the death on December 1, 1911, at the age of eighty-six, of Dr. George Davidson, Professor of Geography, Emeritus, and a former Regent of the University.

**Death of Frank Edward Johnson:**

On February 13 President Wheeler reported the death in San Francisco on January 12 of Frank Edward Johnson, '08, Instructor in Soils.

**Resolutions in Honor of Mrs. Jane K. Sather:**

On March 6 the Regents adopted the following resolutions in honor of Mrs. Jane K. Sather:

WHEREAS, with the death of Mrs. Jane K. Sather her wise, large-minded, and far-seeing plans for benefactions to the University of California have now come to fruition, now, therefore, be it

*Resolved*, That the Regents of the University of California express their deep appreciation of the significance for scholarship and for art of Mrs. Sather's rich benefactions to the University. In the endowment of the Sather Chair in Classical Literature and of the Sather Chair in History, she has provided for all time to come for the support of two of the chairs of most fundamental importance to a university. In her endowment of book funds for the classics, for law, and for history, she has contributed most usefully toward the welfare of the University. In the erection of the Sather Gate as a memorial to her husband, Peder Sather, and in her provision for the building of the Sather Campanile, and for the hanging in its belfry of the Sather Bells, she has given invaluable aid toward the realization of the aim of the University to place before its students and before the American people works of public art which shall set standards of taste and give to the community the inspiration of excellence and beauty.

**Resolutions in Appreciation of Judge Cutler's Services:**

On August 8 the following resolutions in appreciation of Judge Cutler's services were adopted:

WHEREAS, F. A. Cutler, Esq., who for several years has been the Attorney for the Regents of the University of California, retired from his position at the end of the last fiscal year, June 30, 1911, now, therefore, be it

*Resolved*, by the Regents of the University of California, that they hereby express their appreciation of the painstaking, faithful, and efficient legal services rendered by F. A. Cutler, Esq., throughout the period of his attorneyship.

**Resolutions in Honor of Dr. A. A. D'Ancona:**

On February 13 the following resolutions in honor of Dr. A. A. D'Ancona were adopted:

WHEREAS, Doctor A. A. D'Ancona has offered his resignation as Dean of the College of Medicine of the University of California, now, therefore, be it

*Resolved*, That the Regents of the University of California hereby express their deep appreciation of the extraordinary patience, tact, and kindness which he has shown in his many years of service to the University; of his power of vision as to the future necessities and possibilities of the Medical Department; of his integrity and love of truth, and of the admirable quality of his service as executive official of the College of Medicine of the University of California.

**Honorary Degrees:**

On April 9 the recommendation of President Wheeler was adopted that at Commencement the honorary degree of LL.D. be conferred upon:

President Sidney Edward Mezes, '84, of the University of Texas;

President Edmund Clark Sanford, '83, of Clark College;

Professor George E. Hale, head of the Carnegie Solar Observatory on Mount Wilson;

Hon. Horace Davis, formerly President of the University of California.

**Alumni President Not a Regent:**

On February 13 it was reported to the Board that the appellate court had decided unconstitutional the law making the President of the Alumni Association of the University of California an ex-officio Regent.

**Regulations as to Undergraduate Scholarships:**

On April 9 the recommendations presented in the following letter from the Committee on Regulations of the Academic Senate to President Wheeler were adopted:

March 26, 1912.

*To the President:*

I am instructed by the Committee on Regulations to transmit to you the following report on the method of awarding undergraduate scholarships. In 1897 (Regents' Manual, p. 231) in accordance with an understanding with the State Legislature, the Regents established 28 scholarships to be distributed equally among the congressional districts of the state, the students to be selected solely by reason of their mental ability, character and needs, according to the method by which Phoebe Hearst scholarships are awarded. In the same year 28 Levi Strauss scholarships were also established, and by order of the Regents the same method of awarding these scholarships was adopted. Mr. Strauss' letter of gift also recites the distribution according to congressional districts (p. 232). The Regents are not bound by any statute in the matter, and whatever method of distribution is followed with the state scholarships is also evidently to be followed with the Strauss scholarships. The committee is of opinion that in 1897 one of the important principles in view was the desirability of bringing the advantages of the university to citizens resident in quarters of the state remote from the seat of the university, thus strengthening the influence of the university in the state at large, and emphasizing thereby the non-local character of the institution. The committee also recalls that in Gov. Gage's administration the recommendations of the faculties were returned for revision on the ground that too great favoritism was shown to applicants from Alameda and San Francisco counties. The committee would express no opinion as to whether circumstances have changed since 1897; but if the Regents still desire to distribute the scholarships according to congressional districts the committee recommends:

(1) That of the 56 state of California and Levi Strauss scholarships, 5 be awarded to applicants from the eleven congressional districts, five to each district, provided worthy candidates appear, and one scholarship be awarded at large without regard to congressional districts. The committee would emphasize the word "worthy," and suggests that it be interpreted in such a way as to exclude candidates from any district whose intellectual and physical characteristics are below the standard that should safely be maintained for entrance into the University.



(2) The committee approves and recommends the adoption of the following proposal of the committee on scholarships: Where worthy applicants from any congressional district do not equal the number of scholarships, the vacancies may be filled from the applicants from other congressional districts in the order of their merit.

Respectfully submitted,

W. A. MERRILL,  
Chairman of Committee on Regulations  
of the Academic Senate

#### **Vaccination:**

At a meeting of the Board on August 8, the Attorney of the Regents reported that, in his opinion, it is unquestionably within the legal powers of the Regents to require vaccination for admission to the University. It was voted unanimously that the practice of requiring vaccination be continued.

On September 12 a delegation appeared before the Board from the California Anti-Compulsory Vaccination League. This delegation consisted of Messrs. A. J. Waterhouse, J. G. Wright, J. Stitt Wilson, Wilber Walker, Friend W. Richardson, Hugh Craig John A. Wilson, Geo. Gelder, Dr. Woodson Allen, S. A. Hulin, Jacob M. Blake, P. R. Banning, F. C. Shank, and Samuel Taylor. The Board were addressed upon the subject by Messrs. Gelder, Waterhouse, and Wilson.

On November 14 it was voted that the President of the University be requested to give notice to the two students who had not been vaccinated that within a time to be fixed by him they should be vaccinated, and that if within that time they were not vaccinated they would be required to withdraw from the University.

On June 11 it was reported to the Board that Judge William H. Waste of the Superior Court of Alameda County had decided in favor of the Regents the suit brought by the anti-vaccinationists to prevent the requirement of vaccination as a prerequisite for admission.



The following resolution was then adopted by the Board:

*Resolved*, that no student be permitted to attend the University in its departments at Berkeley who does not show by evidence satisfactory to the University physician either that he or she has been successfully vaccinated within the seven years next preceding, or that within the one year next preceding he or she has attempted, with reasonable diligence, to be successfully vaccinated and such attempt has failed; provided, however, that in any case in which it shall appear to the satisfaction of the University physician that the student cannot be vaccinated without danger to his or her health, the requirement of vaccination shall be excused as long as such danger endures.

**University to Participate in the International School of American Archaeology in Mexico:**

On February 13 it was approved that the University of California should become one of the institutions participating in the International School of American Archaeology in Mexico, the University to be represented once in seven years by a member of its staff then taking the sabbatical year. The universities participating are Berlin, Harvard, Pennsylvania, and Columbia.

**Music Courses:**

On August 8 a letter of a committee of the music section of the Summer Session of 1911 was presented to the Board, expressing appreciation of the music courses of the Summer Session, and hopes for an extended course.

**Award of Truxtun Beale Prizes:**

On March 12 it was reported to the Board that the Committee of Award for the Truxtun Beale Prizes for essays on Tolstoy's "What Shall We Do?" had announced awards as follows: The first prize of \$600 to Bayard Hale Jones, '06, sometime LeConte Fellow at Harvard University, now a graduate student in the University of California; the second prize to Mr. Sheldon Cheney, '08.

**Anthropological Museum:**

On September 12 it was reported that beginning October 1, 1911, the Anthropological Museum in the Western Building of the Affiliated Colleges, on Parnassus Avenue, gathered by Mrs.

Hearst's generosity, would be open to the public daily, except Mondays, from ten to four. President Wheeler reported: "The collections are in chief part Peruvian, Egyptian, Californian, Greek, and Roman; the museum ranks in size and in quality of content with the three or four largest anthropological museums of the country. It is by far the largest west of Chicago, and compares favorably with the Smithsonian Institution in Washington. The actual cost of the collections has been nearly a million dollars, while their present value, owing to the uniqueness of many objects, is estimated to be from three to five times as great."

#### **Academy of Pacific Coast History:**

On September 12 it was voted that after September 1, 1911, the salaries and expenses of the Academy of Pacific Coast History be defrayed by the University from its General Fund, subject to such receipts as there might be from subscriptions already made, or from such gifts or subscriptions as might thereafter be made. All previous expenses of the Academy of Pacific Coast History had been met by gift from the Fellows and members of the Academy, etc. The work of the Academy of Pacific Coast History is the development and increase of the great collections in the Bancroft Library, and the preparation of historical matter for publication by the University.

#### **State Rivers and Water Supply Commission of Australia Offers Employment to Irrigation Engineering Graduates:**

On April 9 President Wheeler reported to the Board that the State Rivers and Water Supply Commission of Australia, with the approval of the Australian Government, has offered to three graduates of the engineering classes of the University of Melbourne, or any student qualified to enter that University, who will complete the course in irrigation engineering at either the State College of Colorado or the University of California, employment for a period of three years at a beginning salary of two hundred pounds per annum. Dr. Elwood Mead, formerly Professor of Irrigation Engineering in the University of Cali-

fornia, forwarded a copy of this action to the Dean of the Engineering School of the Melbourne University.

#### **Amendments of Standing Orders of the Board:**

On September 12 Standing Order No. 36 was amended by the addition of the following words: "A first and second alternate member of the Committee on Audit shall be nominated by the Board, for confirmation by the President of the Board; the first alternate shall serve in case of the absence or inability to act of two of the regular members of the Committee on Audit, and the second alternate in case of the absence or inability to act of the first alternate.

On November 20 the Standing Orders of the Board were amended by omitting therefrom Standing Order No. 115, and by the omission from Standing Order No. 90 of the words: "On Audit, consisting of three appointed members, none of whom, however, shall be members of the Finance Committee."

On January 9 the Standing Orders of the Board were amended as follows:

[The principal changes are that the Comptroller and the President, instead of the President and the Secretary, sign the requisitions which precede the expenditure of money; that the Comptroller and the Chairman of the Finance Committee, instead of the Secretary, the President, and the Chairman of the Finance Committee, sign advance vouchers; that the Comptroller signs the warrants drawn on the Treasurer and checks for the refund of laboratory deposits.]

1. The regular officers of the Board shall consist of a President, who is the Governor of the State, as provided by law, a Secretary, a Treasurer, a Comptroller, a Land Agent, and an Attorney. The office of Land Agent may be held also by the person who holds the office of Secretary or by the person who holds the office of Comptroller.

5. The Secretary, Treasurer, Comptroller, Land Agent, and Attorney shall be elected by the Board and shall hold office during the pleasure of the Board. The Secretary, Land Agent, Comptroller, and Treasurer shall give bonds for such amounts and in such form as the Board shall prescribe.

81. Paragraph 6. Amended to read: "Reports of the Secretary, Comptroller, Land Agent, and Treasurer."

382. Amended to read: "The Comptroller shall have charge of the financial affairs of the Dental Department."

158. Amended to read "shall deliver to the Comptroller, instead of "shall deliver to the Secretary."

The word Secretary changed to read "Comptroller" in Standing Orders Nos. 17, 23, 25, 30, 32, 34, 36, 115, 128, 154, 160, 171, 183, 187, 189, 273, 289, 295, 302, 308, 310, 325, 327, 329, 368, 372, 470, and 475.

The adoption of the following new rule, to be known as Standing Order No. 5A:

In the absence of the Comptroller or his inability to act, such person as shall in writing be designated by the President of the University and the Chairman of the Finance Committee shall be authorized to sign all documents requiring the signature of the Comptroller.

[NOTE.—The numbers refer to Standing Orders as set forth in the Supplement to the Regents' Manual dated July 1, 1911.]

160. The words "by the President and Secretary of the University and by the Chairman or Vice-Chairman of the Finance Committee" amended to read: "by the Chairman or Vice-Chairman of the Finance Committee, and by the Comptroller."

158. The insertion of the words "by the Comptroller" after the words "by the President of the University."

453. The addition of the following words: "When the Board of Regents grant a Sabbatical leave of absence on two-thirds salary, it shall be understood that the purpose for which this is done is to give the professor opportunity for study and recreation, in order that the value of his future services to the University may be enhanced. Such leave of absence is to be considered, therefore, as the beginning of a new period of service, and not as the ending of one, unless otherwise specifically provided by the Board."

187. Amended on April 9, to read; "No purchase of \$5 or less in amount shall be made without previous authorization from the Comptroller, except as otherwise provided in these rules."

#### **Provision for Signatures in Absence of Chairman of Finance Committee:**

On August 8 the action of the Finance Committee was approved in informing the Treasurer that in case of the absence of the chairman of the Finance Committee, the other members



of the committee were authorized to sign as acting chairman in the following order: Regents Foster, vice-chairman, and Regents Britton, C. S. Wheeler, and Taussig.

**Automatic Compensation Provisions of Employers' Liability Act:**

On September 12 it was voted that official notification should be given that the Regents have elected to bring their employees within the "automatic compensation provisions" of the recent "Employers' Liability Act" in so far as they legally can.

**Sale of Duplicate Books:**

On November 14 it was voted that the Librarian be permitted to sell at the proper price, at his discretion, such duplicate books as are found in the University Library and are not needed in the administration and use of the Library, the proceeds to be credited to the Library Exchange Fund.

**Recording of Contracts and Acceptances:**

On November 14 it was voted that, as advised by the Attorney of the Regents, contracts or acceptances be not recorded hereafter for the construction of a building devoted to educational work, but that they should be recorded for buildings on properties not used for educational purposes.

**Fuel for President's House:**

On November 14 it was voted that the University should pay for fuel for heating the President's House.

**President's House to be Connected With Power Plant:**

On November 14 the Committee on Grounds and Buildings was authorized to have the Department of Electric Light and Power of the University connect the President's House with the Central Heating and Power Plant, so that the President's House may be heated, as desired, either from the Power Plant, or from the heater already installed in the basement of the President's House; the cost, not to exceed \$2000, to be charged to the Permanent Building Fund (light and water being provided at the University's expense for the President's House).



**Comptroller:**

On November 14 the following resolution was adopted:

WHEREAS, in the opinion of the Regents of the University, the material interests and business affairs of the University are so rapidly increasing, and have already become so extensive and important as to necessitate the employment, by the Regents, of a business manager, to be called a comptroller, and for that reason, the Regents, at their regular meeting, held October 10, 1911, decided to employ such comptroller, and referred the matter to the Finance Committee and the President of the University to report a plan under which such employment should be made, and defining the duties of such comptroller; and

WHEREAS, the Finance Committee and the President have made report and recommendations in that regard; now, therefore be it

*Resolved*, That the said report and recommendations be, and they are hereby approved and adopted, and the Board hereby defines the duties of such comptroller to be as follows:

He shall, subject to the Board of Regents, have charge of the purchasing and sales department and of all the business affairs of the Regents, other than those, by the Organic Act, placed in the hands of the secretary, and such comptroller shall report to the Board of Regents in regard to the business administration of all endowment funds, investment properties, loans, the Kearney Farm matters, and like business and financial matters; but, in regard to the supplies for departments of the University and in regard to business matters directly concerned with any such department or arising therein, the comptroller shall report to the President of the University, who, as heretofore, shall himself report such matters to the Board of Regents. The comptroller shall have nothing to do with the academic and educational side of the University, as distinguished from its financial or business and material side, but the academic and educational side of the University shall continue to be, as heretofore, in the hands of the President of the University, and nothing herein contained shall be construed to confer on the comptroller any of the duties of the President.

**Collateral Loans:**

On December 22 authority was granted to the Finance Committee to make such loans upon collateral security as they might deem proper during the year 1912.

**New Edition of Regents' Manual Authorized:**

On February 13 the Finance Committee was authorized to have a new edition of the Regents' Manual issued.

**Comptroller's Revolving Fund:**

On February 13 the action of the Finance Committee was approved in establishing a revolving fund of \$10,000 for the Comptroller.

**Schedule Bond for Employees:**

On February 13 it was voted that all employees of the University who are under bond, except the Treasurer of the Regents, be bonded under a schedule bond, the name and respective amounts involved to be divided between two surety companies.

**Dedication of the Library:**

On December 22 it was reported to the Board that Dr. Herbert Putnam, Librarian of Congress, would be the speaker at Charter Day and at the formal dedication of the new University Library, built from Charles Franklin Doe's bequest. The exercises of the morning were held in the Greek Theatre, and the formal dedicatory exercises at the University Library.

**Landscape Gardening:**

On November 14 the Committee on Grounds and Buildings was requested to make report to the Board on the matter of entering upon a plan for landscape gardening on the campus at Berkeley. It was declared by the Board as its opinion that, now that a long step forward has been made toward the execution of the Phoebe A. Hearst Architectural Plan, through the erection of the Hearst Memorial Mining Building and the Greek Theatre, the new University Library, California Hall, the central heating and power plant, the Sather Gate, the President's House, Agriculture Hall, and various bridges, roads, paths, sewers, tunnels, heating and electrical work of permanent construction, etc., that the time had now arrived for the preparation and adoption of a permanent plan for landscape gardening on the University campus.

**New Botanical Gardens:**

On December 22 permission was granted to the Department of Botany to develop botanical gardens and experimental plantations in the region from the extension of Piedmont avenue eastward to the east line of the University property. It is the intention of the Department of Botany to use the land west of the Dairy Barn, north of the Cañon road, east of the extension of Piedmont avenue, and south of the eastward projection of the South Drive, as the chief place for botanical garden plots for the next few years.

**Planting Plan for Campus:**

On February 13 the Committee on Grounds and Buildings was authorized to have a planting plan prepared for the campus at a cost of not to exceed \$1000.

**Plans for the Sather Campanile:**

On June 11 it was voted that the Committee on Grounds and Buildings be authorized to have working drawings and specifications prepared by Professor John Galen Howard for the Sather Campanile, and to invite bids, subject to the understanding that the total cost of the Sather Campanile as a complete structure, including elevator, but not including finish floors nor interior trim, shall not exceed \$200,000, and subject to some other conditions.

**Marble Chairs for the Greek Theatre:**

On March 12 the Committee on Grounds and Buildings was authorized to obtain and place in the Greek Theatre two marble chairs, in memory of Professor Joseph LeConte and in memory of Frank Norris, '94, for which gifts of \$250 each had been made by Mr. William R. Davis and by college friends of Frank Norris.

On June 11 the Committee on Grounds and Buildings was authorized to have marble chairs for the Greek Theatre, for which gift moneys were available, installed in the Greek Theatre, in accordance with such design and designation of place as might be determined by the Supervising Architect, Professor John Galen Howard.

**Inscription for the Sather Gate:**

On November 14 an order was authorized to the California Artistic Metal and Wire Company, at \$112, for a bronze inscription, to be placed on the Sather Gate, to read, in accordance with Mrs. Sather's request: "In memory of Peder Sather"; this followed by the dates of his birth and death.

**Swimming Pool for Women Students:**

On September 12 construction was authorized of a swimming pool for the women students, on a vacant lot on College avenue north of Hearst Hall, given to the University by Mrs. Hearst some years ago. It was reported that Mrs. Hearst had offered \$2500 toward the cost of this pool. Construction, however, was deferred, later, on account of the project of moving Hearst Hall and establishing a new track on the site.

**Appropriation for Oiling Roads:**

On December 22 it was voted that an appropriation of \$500 be made from the General Fund for experimental work to be done under the direction of Professor Charles Gilman Hyde as to oiling roads on the campus.

**Appropriation for Borings at Dam Site:**

On December 22 the Committee on Grounds and Buildings was authorized, as a charge against the Permanent Building Fund, to have borings made to determine the fitness of the proposed dam site as a place for the construction of a dam. This site is in Strawberry Cañon, east of University Heights, lands having been purchased there by the Regents which furnish good opportunity for a future reservoir, with a planned capacity of seventy million gallons, for fire protection, irrigation, and general University uses.

**Additions to Buildings and Alterations:**

On June 11 it was voted to build a temporary addition east of the Chemistry Building and an addition north of South Hall, to house the shop of the Physics Department; also to alter the Anatomy Building to provide for the increased number of students; the total cost of this work being estimated at \$15,500.



**Plans and Specifications for Addition to Architectural Building:**

On May 14 the Committee on Grounds and Buildings was authorized to have plans and specifications prepared by Professor Howard for a \$7000 addition to the Architectural Building (to be built from the Permanent Building Fund).

**Alteration of East Hall:**

On May 14 the Committee on Grounds and Buildings was authorized to make East Hall available for the use of the Department of Zoology, the cost of the alterations to be charged to the Permanent Building Fund and of the equipment to a special appropriation from the General Fund.

**Shutters to be Provided on Library Windows:**

On May 14 the Committee on Grounds and Buildings was authorized to have Kinear metal shutters provided for the east windows of the Bancroft Library and the manuscript room in the new University Library, the cost to be charged against a special appropriation from the Permanent Building Fund.

**Designs for Agricultural Hall Furnishings:**

On September 12 it was voted that Professor John Galen Howard have charge of those elements of the furnishings of Agriculture Hall which involve design; as, for instance, book-cases, cupboards, laboratory desks, microscope benches, shelving, cabinets, etc., and that he be paid six per cent commission on the cost; and that this fee, as also the cost of the furnishings for Agriculture Hall, be charged against the Permanent Building Fund.



CONTRACTS, 1911-12

During the year building contracts were approved by the Board as follows:

Contract	Account to which chargeable	Contractor	Price
University Farm:			
Poultry house, brooder house, and foreman's cottage	State Appropriation for Farm Building Operations,	B. J. Duffy,	\$10,243.00
Dormitory.	Permanent Building Fund,	Baumann & Campbell,	31,946.50
Agriculture Hall:			
Wood furnishings, etc.,	Permanent Building Fund,	Brunswick-Balke-Collander Co.,	16,716.00
Metal furniture,	Permanent Building Fund,	Finch Jail Building Company,	21,160.00
Lighting fixtures,	Permanent Building Fund,	Fowler Mallett,	1,850.00
Chemistry Auditorium:	Permanent Building Fund,	F. A. Williams,	22,990.00
Tablet arm chairs,	Permanent Building Fund,	William Bateman,	4,480.00
Chico Forestry Station:			
Barn,	State Appropriation for Station	E. Wightman,	492.00
Los Angeles Medical Department:			
Alterations and additions,	State Appropriation for alterations and additions to Los Angeles Medical Department,	Kling Company,	5,177.00
New hospital unit,			
Riverside Citrus Experiment Station Laboratory:	State Appropriation for buildings and lands at Riverside,	Kling Company,	17,800.00
Sather Gate:		L. C. Waldman,	14,143.37
Completion of granite vases for, Blake Moffitt & Towne Building:	Mrs. Sather's Donation,	Andrew T. Hunt,	3,500.00
Replacement of concrete frame with steel frame for sprinkler tank,	Sacramento Building Reconstruction,	Smith Rice Company,	1,885.00
Women's Senior Hall:	Donation of Associated Women Students,	William Bruce,	3,499.00
University Library:			
Velour hangings for the two great windows of the main reading room,	Permanent Building Fund,	D. N. & E. Walter,	730.00

**Lots 44 and 59 in University Heights Purchased:**

On February 13 it was voted that lots 44 and 59 in University Heights (the region northeast of the new swimming pool) should be purchased from Miss Ida Vandergaw and from the estate of her mother for \$400 each, as a charge against the appropriation from the Permanent Building Fund for the purchase of watershed lands in Strawberry Cañon.

**Purchase of Lot 44 in University Heights Confirmed:**

On March 12 it was reported that the Superior Court on March 4 had confirmed the sale to the Regents of the University of California of lot 44 in University Heights from the estate of Anna Vandergaw.

**Purchase of Lot 55, University Heights:**

On May 14 the purchase was approved of lot 55 in University Heights at \$525, as a charge against the appropriation from the Permanent Building Fund for the acquirement of watershed lands in Strawberry Cañon.

**Increase in Water Rates of Peoples' Water Company:**

On September 12 it was reported to the Board that an increase in the rates charged by the Peoples' Water Company, from 25 cents per thousand gallons for the first 30,000 gallons, and above that 20 cents per thousand gallons, to a new rate of 35 cents per thousand gallons, would make it necessary to increase the budget allotment for water for 1911-12 from \$5000 to \$8500.

**Contract With the Union Oil Company:**

On December 22 contract was authorized with the Union Oil Company for fuel oil for three years from December 1, 1911, at 75 cents, delivered at the University.

**Alteration of Curb and Fence at Hearst Avenue and Oxford Street:**

On September 12 permission was granted to the City of Berkeley to set back the curb and fence at the corner of Hearst avenue and Oxford street, on a curve of thirty foot radius, provided that the work be done without cost to the Regents, and in a manner satisfactory to the Regents, and provided that it be

understood that the permission to the City of Berkeley so to use a portion of the University lands is a revocable license only.

#### **Reconstruction of Dormitory at Lick Observatory:**

On March 12 it was voted that funds be advanced by the Regents for the removal of the old dormitory at the Lick Observatory, as made necessary by its damaged condition, and for its replacement with buildings of an equivalent capacity, and that the Legislature be asked, at its next session, to reimburse the University for the cost, inasmuch as the state carries its own insurance and inasmuch as it is the duty of the state to make good any impairment of the endowment of the University. The cost was estimated at \$50,000.

#### **Professor Howard Architect for the Lick Observatory Buildings:**

On April 9 it was approved that Professor John Galen Howard should do the architectural work for the dormitory and two cottages at the Lick Observatory, at six per cent, necessary travelling expenses to be paid by the Regents, and that if it was found necessary to have an inspector continuously on the work, the University should pay for the services of such an inspector.

#### **Plans Approved for Lick Observatory Dormitory and Cottages:**

On June 11 plans were approved for the proposed dormitory and cottages at the Lick Observatory.

#### **Memorial of Faculty of Medical Department:**

On December 22, the following report of the Committee on Medical Instruction was approved by the Board:

Your Committee on Medical Instruction has the honor of reporting that the faculty of the Medical Department of the University has presented to your committee, through President Wheeler, a memorial concerning the future of medical instruction in the University of California, which is, in part, as follows:

“The Faculty considers the announcement by the University of a definite policy toward medicine as most essential to the welfare of the department.

“1. Because the preparation of a scheme by the Carnegie Foundation to guide medical development on the Pacific Coast has been abandoned.

"2. Because amalgamation of the medical departments of Stanford and the University of California has proved impossible.

"3. Because the uncertainty in regard to the fate of the clinical years renders it impossible for members of the faculty to plan for suitable future expansion, tends to destroy interest and enthusiasm in work, and drives good students to other schools.

"4. Because it seems probable that funds may soon be available to further any rational, permanent, definitely announced plan of the University toward medicine."

The Faculty regards as the essential features of such policy:

"1. The bringing together in one place the various departments of the school. The divorce of the scientific and clinical years has, in the minds of the Faculty, been a serious mistake. That it is a fatal objection to the proper development of medicine is the opinion of experts most competent to judge.

"2. The placing of the clinical years on an academic basis. This may be attained in various ways. Heads of departments may be required to devote a definite portion of their time to teaching, or it may be advisable to call men whose entire time will be devoted to the needs of the school—in teaching, in research, or in the hospital.

"Sufficient funds must be available to pay clinical teachers and to provide assistants in clinical physiology and pathology, departments that will be indispensable in any scheme of hospital development.

"3. Even though funds may be provided for clinical teachers it will be impossible to get the right kind of men to accept positions unless material and a proper place to work be provided. This implies that the University own or control a hospital of (roughly speaking) 200 or 250 beds, and that adequate clinical laboratories be connected with the wards.

"4. The decision as to the type of medical school and as to the probability of the future promotion and encouragement of medicine by the University is all-important. Whether such a school can best be developed in San Francisco or in Berkeley is, in the opinion of the Faculty, a matter of secondary consideration.

"It is the firm belief of the Faculty that if a definite plan be adopted by the President and the Regents of the University, further funds can be immediately secured for the foundation of chairs or as permanent endowment for free beds in hospital."

Your Committee on Medical Instruction has the honor to recommend that it be declared the sense of the Board of Regents that the recommendations hereinabove quoted for the bringing together in one place of the various departments of the school, placing the clinical years on an academic basis, and providing a



proper teaching hospital and proper laboratories are for the best interests of the University as a whole and of the Medical School in particular, and that it is the purpose of the Regents to carry out these recommendations as rapidly as may be within the financial possibilities of the University.

We recommend, further, that it be declared the desire of the Board to establish a medical school of the highest standard, and that it is the desire of the Board to consolidate medical instruction and to place clinical instruction upon an academic basis.

On March 12 it was voted to refer the following letter, transmitted by President Wheeler, to the Committee on Medical Instruction:

SAN FRANCISCO, March 11, 1912.

PRESIDENT BENJAMIN IDE WHEELER,  
University of California,  
Berkeley, California.

*Dear Mr. President:*

The Committee of the Medical Faculty recently appointed by you begs leave to submit the following report:

In the opinion of this committee it is imperative that the plan for the development of the Medical Department already adopted by the Regents be put into operation at once. Uncertainty as to the immediate future of the last two years in medicine is determining many prospective students to look elsewhere for their work of next year, and inadequate hospital opportunities can no longer be expected to command the services of clinical teachers. Funds should, in some way, be obtained for the erection of a university hospital and for the reorganization of the departments of the last two years.

A hospital of 100 beds built upon the present site would, with the material available in the San Francisco Hospital, suffice for the present needs of the school. If it should be decided to develop the school in Berkeley a hospital of 150 beds would be required. Such hospitals would cost approximately \$300,000 and \$450,000. The cost of maintenance of hospital beds can be placed at two dollars a day, or \$73,000 yearly for a hospital of 100 beds; \$109,500 for one of 150 beds. From conservative estimates probably one-third of these amounts would be covered by fees charged patients, leaving \$50,000 or \$73,000 respectively to be provided. The cost of maintenance could still further be reduced by the erection of a private clinic to which members of the hospital staff could send patients. There is a fund at present available for the support of ten free beds, and there is no question that, with a modern Class A hospital more money can be obtained for these foundations.



The committee would further recommend that the work of the last two years be consolidated as soon as possible into three main departments: 1. A Department of Medicine; 2. A Department of Surgery; 3. A Department of Gynecology and Obstetrics. The Department of Medicine would include Pediatrics (children's diseases), Dermatology, and Neurology. The Department of Surgery would include Genito-Urinary diseases, Orthopedics, and diseases of the eye, ear, nose, and throat. The members of the faculty of the clinical years are heartily in accord with this scheme of reorganization and are ready at any time to hand in their resignations in order to admit of its speedy realization.

In accordance with the resolutions already adopted by the Regents, the committee would recommend the placing of these clinical departments on an academic basis as soon as possible. The chief of each department should, as soon as feasible, be paid a salary sufficient to enable him to devote the greater part of his time to teaching and to the development of his department. A budget sufficient to maintain clinical laboratories, to pay clinical assistants and to provide necessary instruments and apparatus should be assigned each department. It is estimated that \$8000 a year would be needed for medicine, \$8000 for surgery, and \$4000 for gynecology and obstetrics.

It is the opinion of the committee that a decision should be reached and announced at once whether the medical school is to be developed in San Francisco or in Berkeley, and whether the plan already adopted by the Regents can be inaugurated at an early date. For the next year, at least, clinical work must be carried on in the present institution, and provision should be made for an additional number of free beds, or for a fund sufficient to keep the hospital full of patients paying small weekly sums for their maintenance. The reorganization of the clinical faculty could be effected at once.

Respectfully submitted,

(Signed) WALLACE I. TERRY,  
HERBERT C. MOFFITT,  
FREDERICK P. GAY.

#### **Medical Department to be Consolidated at San Francisco:**

On April 9 it was voted that it shall be the policy of the Board to consolidate the Medical Department in San Francisco.

#### **Medical School Faculty:**

On April 9 the Regents approved the following recommendation presented by President Wheeler:

I recommend the adoption of the following plan for reorganization of the Medical Department of the University of California as submitted by the committee of the medical faculty on reorganization, Drs. Herbert C. Moffitt, Frederick P. Gay, and Wallace I. Terry:

Clinical instruction in the Medical School is to be carried on in the future under three main departments:

1. Gynecology and Obstetrics.

It is recommended that this department be put upon an academic basis at once and that a salary of \$4000 be given a professor and \$2000 to an assistant.

2. Medicine.

This department cannot as yet be put upon a full academic basis, but the head of the department, Dr. Herbert C. Moffitt, has agreed to devote half his time for the present. Dr. W. W. Kerr is to be Clinical Professor of Medicine, carrying on his present work at the San Francisco Hospital. Twenty-three hundred dollars will be devoted to paying three assistants. The Department of Medicine will include:

- (a) *Pediatrics*, which will be under the direction of Dr. W. B. Lewitt as Clinical Professor of Pediatrics.
- (b) *Neurology*.
- (c) *Dermatology*, under the charge of Dr. Howard Morrow as Clinical Professor of Dermatology.

3. Surgery.

Dr. Wallace I. Terry as head of this department has agreed to give half his time at present for academic purposes. Eighteen hundred dollars will be devoted to paying three assistants. Under Surgery will be included:

- (a) *Orthopedics*, which will be in charge of Dr. Harry M. Sherman as Clinical Professor of Orthopedic Surgery.
- (b) *Genito-Urinary Surgery*.
- (c) *Specialties: Laryngology, Otology, Rhinology, and Ophthalmology.*

In addition to the main departments the work of the Hospital Pathologist is to be reorganized. As Director of Animal Experimentation an additional man at \$700 is to be added to the \$1700 now available. The development of a hospital X-ray department is absolutely essential, and \$1200 is put aside for this purpose.

Clinical professors are subject to annual appointment.

Dr. Thomas W. Huntington, Dr. D. W. Montgomery, and Dr. C. A. von Hoffman are appointed emeritus professors in their respective branches.

The work of the Dean will at present include superintendence of the University Hospital, but as soon as funds can be raised for a suitable hospital it will be necessary to secure the services of a properly trained hospital superintendent. For the coming year the Dean of the Medical School is to be Dr. Herbert C. Moffitt.

## SUMMARIZED CLINICAL INSTRUCTIONAL BUDGET

Professor of Obstetrics and Gynecology .....	\$4,000.00
Assistant in Obstetrics and Gynecology .....	2,000.00
Assistants in Medicine .....	2,300.00
Assistants in Surgery .....	1,800.00
Additional salary of Hospital Pathologist .....	700.00
X-ray department .....	1,200.00
Salary of Dean (already provided) .....	2,400.00
	<hr/>
	\$14,400.00
Deduct \$2,400.00 .....	2,400.00
	<hr/>
Total .....	\$12,000.00

I lay before the Regents the resignations of the following members of the faculty in the Medical School, submitted in accordance with the report of the special committee on reorganization, and to take effect at the pleasure of the Board:

Dr. A. J. Lartigau, as Assistant Professor of Gynecology.

Dr. Herbert C. Moffitt, as Professor of the Principles and Practice of Medicine.

Dr. Harry M. Sherman, as Professor of the Principles and Practice of Surgery.

Dr. Harold Brunn, as Instructor in Surgery.

Dr. Howard Morrow, as Assistant Professor of Diseases of the Skin.

Dr. John C. Spencer, as Assistant Professor of Genito-Urinary Surgery.

Dr. George E. Ebright, as Instructor in Medicine.

Dr. Charles A. von Hoffman, as Professor of Gynecology.

Dr. Thomas W. Huntington, as Professor of Clinical Surgery.

Dr. W. B. Lewitt, as Professor of Pediatrics.

Dr. W. W. Kerr, as Professor of Clinical Medicine.

Dr. Wallace I. Terry, as Assistant Professor of Surgery.

Dr. D. W. Montgomery, as Professor of Diseases of the Skin.

**Oil-Burning Plant for University Hospital:**

On November 14 it was voted that \$2000 be appropriated from the General Fund for the installation by the Department of Electric Light and Power of the University of an oil-burning plant for the heating system of the University Hospital at the Affiliated Colleges. It was estimated that the cost of this installation would be more than saved by the reduction in the fuel bill consequent upon a change from coal to oil.

**Alterations in University Hospital and Veterinary Building:**

On June 11 the Committee on Medical Instruction was authorized to have alterations made in the University Hospital Building and in the Veterinary Building at the Affiliated Colleges to fit these buildings better for the work of the University Hospital and Medical Department, at an estimated cost of \$12,000, to be charged against the Permanent Building Fund.

**Standards of Admission to the Dental Department:**

On December 22 it was voted to refer to the Academic Senate the following letter to President Wheeler from Dr. James G. Sharp, Dean of the Dental Department:

May I remind you that beginning with August, 1913, the Junior Certificate will be required for admission to the College of Dentistry, in accordance with a resolution submitted to the Board of Regents by the Academic Senate, and adopted December 14, 1910.

Realizing that the revenues of the University have been seriously impaired by recent legislative acts and believing that raising the standard of admission will tend to decrease the enrollment and thereby lessen the revenue of the department, I would respectfully urge that full consideration be given the question as to whether the Regents are willing to carry the Dental Department through a period involving small classes and proportionately small revenue for a few years, or of deferring the time of raising standards until a more favorable financial period.

The announcement of this department is issued in March, and I feel that a change of policy, if any be made, should be published in the announcement. Professor Lange, as Chairman of the Committee on reorganization of the Dental Curriculum, has been consulted in this matter and we came to the conclusion that it should be referred to you and the Board of Regents to decide.

My personal recommendation and that of the Dental Faculty is that the raising of the requirement of admission to the Dental School should be deferred indefinitely.



**Finances of Los Angeles Medical Department:**

On August 8 Regent McKinley reported that the Los Angeles Medical Department could not carry on its work on the basis of its own receipts. It was voted to refer the matter to the Finance Committee and the Committee on Medical Instruction, with power to take such action as might temporarily be needed.

**Los Angeles Medical Department Authorized to Expend \$10,000:**

On September 12 it was voted that the Los Angeles Medical Department be authorized during the current fiscal year to expend not to exceed \$10,000, such of this amount as is not provided for by the receipts of the Los Angeles Medical Department to be regarded as an appropriation from the General Fund provided, however, that it is the sense of the Board of Regents that this is merely a provisional arrangement, and that at the next regular session of the Legislature, the Legislature itself should say whether or not the State of California wishes to provide for medical instruction in the University of California and, if so, whether the state will grant special moneys for medical instruction.

**Architect for Los Angeles Medical Department Alterations:**

On September 12 Mr. A. B. Benton was appointed architect for the alterations of the Los Angeles Medical Department buildings, at a fee of five per cent, these alterations not to exceed in cost the state appropriation of \$25,000.

**Remodeling of Old Buildings of Los Angeles Medical Department:**

On March 12 permission was granted to the Hospital Committee of the Los Angeles Department of the College of Medicine to expend from their budget allowance of \$10,000 such sums as are necessary for the remodeling of the old buildings of the department to make them conform to the new plans, and the committee was authorized to have this work done by day labor in place of by bids; this work being subject to the supervision of the Comptroller.



**Gold Medal Awarded to Los Angeles Medical Department:**

On October 10 it was reported to the Board that a gold medal had been awarded by the American Medical Association at its sixty-second annual session to the Los Angeles Medical Department of the University of California for the best exhibit in gross pathology, as prepared under the supervision of Dr. Stanley P. Black. It was voted that the medal be transmitted by the Regents to Dr. Black with an expression of appreciation for the work which he had done.

**Outline of Work for Southern California Pathological Laboratory and Citrus Experiment Station:**

On June 11 the following outline of work for the Southern California Pathological Laboratory and Citrus Experiment Station for the year 1912-13, submitted by Professor E. J. Wickson, Dean of the College of Agriculture, was adopted:

1. The enlargement of the plant disease laboratory at Whittier, the installation of a heating furnace therein, the construction of a small building supplementary thereto and additions to equipment thereof, all having been completed as provided for by the last legislature, we are now in possession of increased and improved facilities for research and experiments in diseases affecting economic plants in southern California and much new work in that line will be undertaken. In addition to better provision for the activities of our own experts, we shall supply office and laboratory facilities to Professor H. S. Fawcett, plant pathologist of the State Commission of Horticulture, who will investigate certain diseases of citrus fruit trees with the advantage of experience in the same line of work in Florida.

2. Professor W. T. Horne, who has been studying the causes of root-rot of fruit trees in central and northern parts of the state, will devote attention also during the coming year to similar phenomena in southern California.

3. Work will be continued with the walnut blight, both to demonstrate immunity of varieties and to determine the practicability of direct attack upon the blight by spraying with fungicides by means of new arrangements for the treatment of very large trees devised in the warfare upon the gipsy moth upon shade and forest trees in New England. Mr. Thomas F. Hunt will give personal attention to this problem which is of great importance in all the walnut growing regions of the state. A monograph on the walnut in California by Professor R. E. Smith and his associates will be published early in the year.

4. Mr. S. S. Rogers will continue his work for the protection of commercial vegetables and will give his whole time thereto, particularly to disease problems which have arisen in the growing of the tomato, water melon, onion and sweet potato.

5. The nature and possible control of various blemishes, spots, etc. which affect the value and keeping quality of lemons will be studied by Mr. A. R. Tylor in the laboratory and packing houses. In the same line will be the experiments of Mr. E. E. Thomas in the disinfection of the lemon-washer against the spread of various other forms of decay as well as the brown rot, for which a successful treatment was demonstrated at the Whittier laboratory.

6. Mr. C. O. Smith will continue his work with the crown-gall of fruit trees, particularly in the testing of various available roots with reference to their susceptibility to this trouble. Mr. Smith has isolated the specific organism causing this disease and has demonstrated its character by artificial inoculation.

7. Increased attention will be given at Whittier during the year to the investigation of soil-effects upon the health of fruit trees and other plants. It will not be a study from the point of view of the soil specialist nor have to do with the general characters of soils, but with their possible agencies in causing diseases of plants. Facilities for this work have been provided and will be pursued by Mr. E. E. Thomas.

8. An elaborate series of experiments, with specially arranged apparatus, to determine several important biological questions in connection with characters of citrus fruits which affect their commercial value, will be undertaken by Mr. H. D. Young. Mr. Young also will make a study of soil moisture in its relation to certain plant diseases to determine how far these troubles may be attributable to abnormal soil-moisture conditions and therefore subject to control by regulation of irrigation, either in amount or method of application, etc. All these experiments will be made with specially constructed growing tanks of adequate size and with arrangements for absolute control of moisture, drainage, aeration, etc. and with facilities for observation of roots in place. It is expected that this work will be carried on under better regulating and observing conditions than ever before.

9. Entomological work at Whittier will be continued by Professor H. J. Quayle and Mr. J. D. Neuls. The study of citrus insects which has resulted in the publication of several important bulletins by Professor Quayle during the current year, will turn now to the citrus red spider and particular attention will also be given to the walnut aphid and various other pests of much economic importance. Mr. P. H. Timberlake of the U. S. Department of Agriculture will continue his investigation of insects parasitic upon injurious species, especially those affecting citrus trees.

10. The coming year will see a somewhat radical change in the work of the Whittier Laboratory on account of the building of a comparatively large and complete laboratory at the Riverside Station, which when completed will become a headquarters for part of the work which has hitherto been handled at Whittier. It is the idea that after the completion of the Riverside Laboratory the work of that Station will become largely independent of that at Whittier, being developed on a broad basis along any or all lines which may seem desirable for the promotion of the citrus industry, while the work at Whittier will be more closely limited to Plant Pathology proper, including Entomology. At the Riverside Station a coöperative arrangement has been entered into with the United States Department of Agriculture whereby the latter agency will station expert investigators more or less permanently at Riverside, to carry on investigations looking toward the solution of some of the more serious problems of the citrus industry. This work, as outlined at present, will consider more particularly problems connected with the condition and proper treatment of the soil. Professor J. Eliot Coit will assume charge of the Riverside Station, transferring his residence to that place. Personally, he will carry on citrus investigations along pomological lines and likewise coöperate with the federal investigators as fully as possible.

11. As attached, in the original law for its establishment by the legislature of 1909, to the Southern California Laboratory and Branch Agricultural Experiment Station at Riverside, the Imperial Valley substation is included in this enumeration. In accordance with the act of the legislature of 1911, a very desirable tract of twenty acres of land at Meloland was donated with an obligation to provide twenty acres additional within two years. An outfit of inexpensive buildings suitable for station uses has been erected. Fencing, team, tools and supplies were also provided, the land planted to field crops and fruits and the Station formally opened on May 25, 1912. The station is in charge of Mr. W. E. Packard, who has been the University representative in Imperial Valley since the beginning of the investigation provided for by the legislature of 1909. During the coming year various plantings will be made and observation recorded relating to the adaptation of various plants and methods of culture to the conditions locally prevailing. The station will also serve as headquarters for the investigation of soils, live stock, injurious insects, etc., which will be undertaken by University experts so far as funds provide for their work. The station commands the active interest and support of those who are interested in the development of the Valley and of similar areas adjacent thereto.

**Purchase of Block 9, Rubidoux Heights, Riverside:**

On September 12 it was voted that \$2500 be paid to the Riverside Title and Trust Company in consideration for which that company should deliver to the Regents a deed from the Huntington Park Association to the Regents for Block 9 of the Rubidoux Heights, Riverside. By a lease made June 30, 1906, this land was leased to the Regents by the Huntington Park Association for twenty years at a rental of \$150 per annum. The Regents in 1907 paid \$4000 for the buildings on this land, including two five-room cottages, a stable, a horse-shed, and all out-buildings, water-pipes, trees, and other improvements. When the lease was made, a deed for Block 9 was placed in escrow, to be delivered, provided that the Regents paid \$2500 to the title company on or before October 3, 1911.

**Erection of Laboratory, Riverside Citrus Experiment Station:**

On September 12 it was voted to erect a laboratory building, for the work of the Riverside Citrus Experiment Station, the cost of the laboratory and its equipment to be charged against the state appropriation of \$25,000 for the Riverside Citrus Experiment Station.

**Architect for Buildings at Riverside and Whittier:**

On September 12 it was voted that Mr. Lester A. Moore, of Los Angeles, be architect for a laboratory to be erected at the Riverside Citrus Experiment Station and construction work to be performed at the Pathological Laboratory at Whittier.

**Agricultural Demonstration Train:**

On August 8 President Wheeler reported that the Agricultural demonstration train had been visited during 1910-11 by over 73,000 people, that it was of great service to the state, but that, although the Southern Pacific Company generously defrayed the cost of the train service, the work, nevertheless, meant large expense to the University and interference with the duties of the members of the faculty of the College of Agriculture. It was voted to continue the operation of the Agricultural demonstration train.



**Quitclaim Deed for Petaluma Poultry Experiment Station:**

On August 8 it was voted that a quitclaim deed should be executed to George P. McNear for the Petaluma Poultry Experiment Station (the five-acre site for the station having been leased from Mr. McNear on January 18, 1904, upon the condition that should the experiment station at any time be abandoned, the lease should at once terminate). The site to which the Regents thereby relinquished any claim was five acres in the Whitney tract, half a mile east of Petaluma, Sonoma County, the land being described as follows:

Commencing in the center of a sixty (60) foot road, four hundred and twenty (420) feet south of the County Road leading from Petaluma to San Rafael; thence running south in the center of the road three hundred and eighty (380) feet to the land heretofore conveyed by said George P. McNear to R. Holm; thence east on the line of R. Holm five hundred and seventy-five (575) feet; thence north three hundred and eighty (380) feet to the place of beginning.

**License to Sell Fertilizer Refused Johnson Fertilizer Association:**

On August 8 it was voted to refuse to grant to the Johnson Fertilizer Association a license to sell as a fertilizer the ground Nevada rock which they wished to offer for sale as a fertilizer, inasmuch as Professor John S. Burd, the University Fertilizer Control chemist, had reported that he believed that the product which they wished to sell as a fertilizer was practically worthless.

**Richardson Latin Prize Endowment:**

The lot on Eunice street, Berkeley, bequeathed to the Regents by Professor George Morey Richardson, as endowment for an annual prize in Latin Prose Composition, were sold, by vote of the Regents on September 12, 1911, to Katharine H. Roulstone for \$1600.

**Trust Funds of the Y. W. C. A. and the Alumnae Y. W. C. A.:**

On January 9 the following resolutions were adopted:

*Resolved*, That, in accordance with the offer of the Young Women's Christian Association of the University of California, a corporation, the Regents accept from it the sum of five thousand dollars (\$5000), to be held by them in trust and invested and



reinvested as they may deem wise; the income thereof to be paid to said Young Women's Christian Association to be used by it in the payment of the salary of a secretary. Either the Regents or said Young Women's Christian Association shall have the right to put an end to said trust at any time upon thirty days' previous notice in writing to that effect, and upon such termination the said sum of five thousand dollars, together with any accrued income not theretofore paid to the Young Women's Christian Association, shall be paid over to the latter.

Similar resolutions were adopted, accepting \$600 from the Alumnae Young Women's Christian Association, on exactly the same terms.

It was approved that the Regents should, until further action by the Board, pay over income on these trust funds at the rate of 5 per cent per annum, payments to be made semi-annually.

#### **Endowment Pool Rate:**

On September 12 it was reported to the Board that the Endowment Pool rate for the six months ending June 30, 1911, was at the rate of 6.24 per annum.

On April 9 it was reported to the Board that the Endowment Pool income for the half-year ending December 31, 1911, was at the rate of 5.82 per annum.

#### **Pacific Gas and Electric Company Bonds:**

On March 12 it was reported that a gain of \$500 for the Endowment Pool had been made through the fact that two 5 per cent bonds of the Pacific Gas and Electric Company, carried in the books at the purchase price of \$800 each, had been redeemed by the company at 105 and accrued interest.

#### **Fund of Students' Coöperative Society:**

On December 22 the action of the Finance Committee was approved in accepting from the Students' Coöperative Society the custody of their surplus fund of \$11,000 and guaranteeing interest on it at 5 per cent, this interest to accumulate semi-annually, and the money to be available to be withdrawn when the Students' Coöperative Society may desire, the intention of the Society being to use it eventually for the equipment of permanent quarters.

**Summer Session Endowment:**

On December 22 it was voted that \$6000 of the accumulated surplus of the past two Summer Sessions be added to the Endowment Pool as an endowment for the Summer Session, the income to be used for extraordinary purposes of the Summer Session.

**Agreement with Country Club Heights Company:**

On March 12 the President and Secretary of the Board were authorized and directed to execute an agreement with the Country Club Heights Company, as prepared by the Attorney of the Regents, for the sale of the land owned by the Regents in the Broadway Terrace Tract, Oakland, at \$71,000, the buyers to pay \$10,000 down and the balance in six annual installments, the first five of these being in the amount of \$10,000, and the final installment in the amount of \$11,000, with interest at 6 per cent on deferred payments; releases to be given by the Regents on individual lots on the completion of payment by the Country Club Heights Company for such individual lots, on the basis of a schedule constituting a part of the agreement. The Country Club Heights Company assumed the cost of street work and improvements. The proceeds of this sale constitute part of the endowment of the Agassiz Chair of Oriental Languages, founded by the late Edward Tompkins, a Regent of the University.

**Title to Certain Broadway Terrace Tract Lots:**

On November 14 the Attorney of the Regents was authorized to file a disclaimer for lots 3, 4, and 5, in Block F, Broadway Terrace Tract, Oakland, upon the payment by Mr. Henry St. George Hopkins of \$60, with interest from May 16, 1905, to the date of the disclaimer, at the legal rate of 7 per cent. This was recommended by the Attorney of the Regents as a proper settlement of a pending suit, brought by Mr. Hopkins against the Regents.

**Street Assessment, Fourteenth and Washington streets, Oakland:**

On April 9 it was approved that the assessment of \$8000 against the property at Fourteenth and Washington streets, Oakland, for the opening of Washington street, should not be contested.

**Quitclaim Deed to Emily K. Latham:**

On March 12 the President and Secretary of the Board were authorized and directed to execute, upon approval by the Attorney of the Regents, a quitclaim deed, with proper assignments, to Emily K. Latham for the lot at the northwest corner of Durant and Telegraph avenues, Berkeley, with a frontage of 104.82 feet on Durant avenue and 120 feet on Telegraph avenue

**Blake, Moffitt, and Towne Lease:**

On February 13 the action of the Finance Committee was approved and confirmed in authorizing the execution of a lease to Messrs. Blake, Moffitt, and Towne, prepared and approved by the Attorney of the Regents, dated January 25, 1912, for a reinforced concrete building on First street, for a term of ten years, beginning June 1, 1911, at a rental of \$918.71 per month

**Agreement as to Floors in Blake, Moffitt, and Towne Building:**

On November 14 the President and Secretary of the Board were authorized to execute an agreement with Blake, Moffitt, and Towne, providing that no claim shall be made against the tenant at the time of the expiration of their lease on account of the condition of the floors in the Blake, Moffitt, and Towne Building

**Settlement with Creditors' Committee of Standard Construction Company**

On September 12 the action of the Finance Committee was approved in having a settlement arranged by the Attorney of the Regents with the creditors' committee, whereby \$12,189.24 the amount then remaining due to the Standard Construction Company under its contract for \$51,636 for work done on the Blake, Moffitt, and Towne Building, was paid to the creditors of this company on a pro rata basis of \$0.911 on the dollar.

**Standard Construction Company, Interpleader Suit:**

On November 14 the Attorney of the Regents was authorized to bring an interpleader suit against the creditors of the Standard Construction Company, which had the contract for the concrete work for the Blake, Moffitt, and Towne Building, and against the Trustee in Bankruptcy of the Standard Construction Company in order to have determined judicially the amount due to the

Regents from the Standard Construction Company, and the matter of payment or distribution. The Regents still held approximately \$12,189 of the contract amount. The object of this suit was to protect the interests of the University in the payment or distribution among the creditors of the amount still due under the contract.

**General Indemnity Bond in Favor of Southern Pacific for Removal of Freight:**

On February 13 the President and Secretary were authorized to sign in behalf of the Regents a general indemnity bond to be given by the Regents, in favor of the Southern Pacific, for \$1000, for the removal of freight from San Francisco or Berkeley, without surrender of bills of lading, and a similar bond for \$2000 for the removal of freight at Fresno and Kerman.

**Claim of Messrs. MacDonald & Applegarth for Architectural Fees:**

On August 8 it was voted to refer to the Finance Committee and to the Attorney of the Board a communication from Messrs. Teller, Powers, & Ehrman, attorneys for MacDonald & Applegarth, presenting a claim against the Regents for \$12,106.50, claimed as fees for plans for a building on Sutter street.

On September 12 it was reported to the Board that papers had been served on the Secretary in the suit of MacDonald & Applegarth vs. the Regents for fees claimed for architectural services claimed to have been rendered.

**Resolution Recommending that State Highway pass Through Kearney Vineyard:**

On January 9 it was voted to adopt the following resolution:

*Resolved*, That the Regents of the University of California earnestly recommend the State Highway Commission that the main state highway for the San Joaquin Valley be so established that the Kearney boulevard from Kearney Park to Fresno shall be made a constituent part of this highway, it being the sense of the Board that such location of the highway is recommended by the present and future scenic, educational, and scientific significance of the Kearney Estate, and by the value to the state of easy and general public access to its ornamental, educational, and



economic aspects; and, further, that such location of the highway is imperatively indicated by the character of the topography, the present provision of roads and bridges, the richness of the country traversed, and the amount of population as compared with other proposed routes.

## DEGREES, SCHOLARSHIPS, AND MILITARY COMMISSIONS

### Degrees:

For a complete list of the degrees conferred on December 22, 1911, and May 14, 1912, and of the recipients of scholarship and of military commissions for 1911-12, see the Commencement Programme of June, 1912.

### University Medal:

The University Medal for 1912, on recommendation of the Academic Council and by vote of the Regents, was conferred upon Lester Seward Ready.

## LEASES

During the year leases were approved by the Board as follows

Lessee	Property	Term	Total Amount
Messrs. Blake, Moffitt, & Towne,	Building on First street, San Francisco,	10 years, beginning June 1, 1911	\$918.71 per month
Reinhart Lumber and Planing Mill Co.,	Block 138, Potrero addition to San Francisco,	Jan. 1, to June 30, 1912,	150.00 per month
		July 1, 1912, to June 30, 1913,	200.00 per month
		July 1, 1913, to June 30, 1914,	225.00 per month
		July 1, 1914, to Dec. 31, 1916	250.00 per month
Emma A. Kreutzer,	University Cottage No. 4, Campus,	July 1, 1911, to Dec. 31, 1912	25.00 per month
Lucy Sprague (for a girls' club),	2642 Sylvan way, Berkeley,	Aug. 15, 1911, to June 30, 1912	55.00 per month
Alice C. Lynch,	160 acres in Monterey County and 1016 acres in San Luis Obispo County,	Three years	235.20 per annum
Dr. W. P. Burks,	240 acres, Squaw Valley, Fresno County,	Five years	24.00 per annum
Samuel B. Stanley,	79.93 acres in Strawberry Cañon, Berkeley,	July 1, 1911, to June 30, 1913	35.00 per month
H. Robert Fares,	152 Cañon road, Strawberry Cañon, Berkeley,	Terminable on one month's notice	3.00 per month
Linwood Kelley,	150 Cañon road, Strawberry Cañon, Berkeley,	Terminable on one month's notice	5.00 per month



## DEAN OF THE SUMMER SESSION

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BERKELEY, August 1, 1912.

*To the President of the University,*

SIR: The general policy of the summer session during the two years covered by this report has remained unchanged. The total enrollment in 1911, not including the summer school of surveying, was 1950. Of this number 625 were men and 1325 women; 1630 came from California, and the remainder from 36 other states and 3 foreign countries; 1160 were teachers, 375 college students, and 415 represented 30 other occupations.

In 1912 the total enrollment was approximately 2300, an increase of 350 over the previous year. The distribution remained practically the same. At the session of 1912 there was a conspicuous increase in the number of graduate students; 510 held the bachelor's degree, and upward of 76 the master's degree. The number of students who return to a second and third summer session is also noticeably increasing. This suggests the urgent recommendation that I have to make,—namely, that courses be provided which may be taken in sequence through several summer sessions. In this manner we should be able to accomplish creditable seminar work in the summer time.

Respectfully submitted,

C. H. RIEBER,  
Dean of the Summer Session.

## WILMERDING SCHOOL

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SAN FRANCISCO, July 1, 1912.*To the President of the University,*

SIR: I feel justified in saying that the Wilmerding School has gained ground during the past two years. In the matter of finances we continue to show a yearly surplus. Our annual enrollment remains from 200 to 230, which is the limit of our capacity. Our graduating class for the year 1911-12 numbered twenty-five, showing a considerable gain over preceding years. While it is still true that many of our boys have to go to work early under financial stress, our clientage being largely among people of moderate means, it is also true that that clause of our endowment which provides that we shall give our students "plenty of work and little study" has always brought to our doors in greater or less numbers boys who have not a high appreciation of the value of a diploma. In the latter respect, however, we have noticed a decided improvement in recent years, the boy of substantial qualities being more and more in evidence. This is not due to any change in scholastic requirements, or conditions of admission being the same as heretofore, but rather to a general uplifting of the tone and spirit of the school, and a growing solidarity that is winning the confidence of parents and pupils and the public at large.

My report of July 1, 1910, made mention of the Frederick B. Ginn bequest of \$20,000 for the maintenance of orphan boys in the Lick and Wilmerding schools. Since then Mrs. Ginn has added to this fund from the residuary portion of the estate of

sum of \$24,862.10. During 1910-11 five boys were maintained in the Wilmerding School under this fund, and an equal number during 1911-12. Two of our graduates in June, 1911, were Ginn beneficiaries, and two again in 1912.

Respectfully submitted,

GEO. A. MERRILL,  
Director.

## CALIFORNIA MUSEUM OF VERTEBRATE ZOOLOGY

BERKELEY, July 1, 1912.

*To the President of the University,*

SIR: During the past two years the activities of the California Museum of Vertebrate Zoology have been continued in close accordance with the plans outlined in the president's last biennial report. These plans, it will be remembered, owe their beginning to the original foresight of the founder and continued patron of the museum, Miss Annie M. Alexander. It is a satisfaction to be able to report that the course of events, as these plans are being worked out, proves their justification to a maximum degree.

Field work has been conducted during this latest biennial period entirely within the state of California. This restriction is the outcome of our growing belief that no more diverse region and hence none of more significant character for faunal study exists in all America than that included within the boundaries of California. Two other considerations support the same policy, namely, that explorations near at hand bring much greater result with the same expenditure of time and money than those at a distance, and that whatever information of general use is gathered becomes at once of value to the commonwealth of which we should be a contributing part.

During the past two years, field work has been carried on in the following parts of California: Humboldt Bay region, Trinity Mountain region, San Joaquin Valley, Sacramento Valley, Mount Whitney region, and Owens Valley.

Approximately one-third of the time of each member of the staff has been devoted to out-door work, the remaining two-thirds being occupied about equally in routine curatorial work and in research upon the collections. One of the above explorations, that in the Trinity Mountain region of northwestern California was conducted, for an aggregate period of nearly four months, by Miss Annie M. Alexander, entirely at her own expense and with assistants provided for outside of the museum staff; that is, the cost of this piece of work was borne by Miss Alexander altogether outside of the funds contributed by her to the museum, and appearing upon the auditor's semi-annual reports.

As one result of the field activity above indicated our research collections now number 42,947 catalogued specimens, a gain of 18,243 over the total of July 1, 1910. In the subjects of ornithology and mammalogy we now have for reference the largest collections in any institution west of Chicago.

Our motives may be properly queried at this point. What is the object of the amassing of all these "animal remains"? In the first place, each specimen is a compendium of facts in speciation, variation, and environmental response; further, it is a guarantee of facts for the study of geographic distribution. As repeatedly emphasized heretofore, the "specimens" obtained are but an element (an essential one, however) in the mass of information obtained through detailed faunal study.

The larger a museum's horde of specimens, and the greater the number of localities represented, the more nearly does this material constitute an adequate basis for the statement of generalities. Published studies in our field in the past show many mistakes, due to paucity of material; such mistakes are now being cleared up, through our own accumulations of relevant specimens and information, and numbers of altogether new things are being discovered, as well.

As a general bureau of information in regard to the higher vertebrate animals of our state and the west in general, the museum shows rapid growth. Specific service has been rendered to the United States Biological Survey, to the California Fish



and Game Commission, and to the United States Public Health and Marine Hospital Service.

In pursuance of our now generally known policy of free loaning of material to investigators anywhere, requests for material have been numerous, and in nearly every case have been promptly and favorably considered. Forty-one different loans of specimens have been made to individuals or institutions outside of the University of California during the past two years.

Our own staff members are putting on published record various facts of special interest as fast as this is practicable. A total of 675 printed pages of this origin have appeared since July 1, 1910. The bulk of this matter has been issued in the zoological series of the university. In addition to this, our office is responsible for the editing of an ornithological periodical, *The Condor*. Also several papers have been published by authors outside of the university, dealing in part with specimens from this museum.

Library facilities for research have been brought rapidly towards an ideal basis through special grants by the library committee of the university for the purchase of books in our particular field of zoology. There still remain three important sets, and a number of single volumes which it is hoped can be provided for at an early date.

Respectfully submitted,

J. GRINNELL,  
Director.

## GIFTS TO THE UNIVERSITY\*

## GENERAL LIST†

1910-11

Alexander, Miss Annie M., \$12,299 for the support of the California Museum of Vertebrate Zoology during the year 1910-11. Her original offer for the support of the work was of \$6,000 per annum.

An Alumnus, \$150 for law books for the Department of Jurisprudence.

Anderson, Frank B., \$162.50 for the Department of Economics, representing the return of his honorarium for the Weinstock Lecture delivered by him on February 15.

Arnold, Julean, a mounted specimen of a Heavenly Dog, which has been installed in the California Museum of Vertebrate Zoology.

Associated Students, The, new bleachers north of California Field. The cost of the erection of these bleachers, which increased the seating capacity of California Field from 14,463 to 17,465, was defrayed from the receipts from athletic sports.

Beale, Regent Truxtun, \$1,000 for two prizes of \$600 and \$400 each for the best and the second best essay written by students of the University on Tolstoy's book, "What is to be Done?" On April 11 the following recommendations of the Committee of Arrangements, consisting of Professors Gayley, Stratton, and Noyes, for the administration of the Beale Prizes were approved by Regent Beale and the Board:

(1) That competition for the Beale Prizes be open to the following classes of persons:

- (a) Candidates for degrees in any department of the University of California;
- (b) Any other students in the University of California who are taking at least twelve units of work;
- (c) Holders of a bachelor's degree from the University of California of a date not earlier than May, 1908.

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\* For gifts to the University Library see pages 84-87.

† Compiled by the Secretary of the Regents from the official records.

(2) That essays presented in competition for the Beale Prizes contain not less than 5,000 nor more than 30,000 words. These limits, however, are suggested as advisable, not as obligatory; the Committee would not refuse to consider an essay that did not fall within them.

(3) That essays presented in competition for the Beale Prizes should be in the hands of the Recorder on or before January 15, 1912, and that the regulations for the external form and for the identification of the essays be the same as for the Bonnheim Prizes.

(4) That the choice of subjects for the essays be left to the writers with the restriction that each essay must be a unit in itself, suitable for publication as a monograph, and that it must be intimately connected with the work of Leo Tolstoy, *What Shall We Do Then?* Essays may thus take the form of criticism, interpretation, or refutation of this book as a whole, or of any part of it. They should, however, be concerned with the fundamental ideas of the book, not merely with its style or literary form or with insignificant details of its subject-matter. The following topics may give an idea of the sort of work that the committee regards as desirable:

The value of the social ideal set forth by Tolstoy in "What Shall We Do Then?"

The validity of the ethical argument in Tolstoy's "What Shall We Do Then?"

Tolstoy's ethics in "What Shall We Do Then?" considered as to their origin and as to their relations to the ideas of other men who may have influenced Tolstoy.

Tolstoy's ideals of social reconstruction compared with those of any other prominent thinker, ancient or modern.

The ethical and social teaching of "What Shall We Do Then?" compared with that of earlier and later works of Tolstoy.

(5) That the selection of the best two essays submitted in competition for the Beale Prizes be in the hands of a committee appointed for the purpose, a majority of which shall consist of persons not directly connected with the University of California; and that if, in the judgment of that committee or of the present committee, neither of those essays, or only one of them, is worthy of publication, then no prize, or only one prize, be awarded.

(6) That essays to which prizes are awarded become the property of the University of California, which shall have them published in suitable form.

Butler, F. M., a collection of corals from the Fanning Islands.

Carnegie Foundation, The, for the Advancement of Teaching, retiring allowances for the year 1910-11 for the following members of the faculty or widows of professors:

Isaac Flag	\$1,600
George H. Howison	2,875
Robert H. Loughridge	1,420
Albin Putzker	1,500
Sarah F. L. Rising	1,035
Frank Soulé	2,045
Martha S. D. Stringham	960
	<hr/>
	\$11,435

Claypole, Dr. Edith J., (and Mrs. Robert Orton Moody), a collection of specimens used in the original publications by the late Professor E. W. Claypole.

Derby, Mrs. Lily Hitchcock, a portrait of Lieutenant George H. Derby.

Emanuel, The, \$100 as a contribution sent through the University, toward the maintenance of the School of Archaeology at Jerusalem.

Denny, Mrs. Kate T., of Berkeley, "The Golden Gate," a marine painting by the California artist, G. J. Denny.

Grayson, Mrs. Francis Grayson, a scrapbook compiled by Mrs. Crane; manuscripts, letters, etc., of Col. Grayson; drawings and photographs illustrating the scrapbook; ten bound books, three unbound pamphlets, and several unbound parts of the Ornithology of the Pacific Railroad Explorations.

Hick, Mrs. William H., \$1,000 for the purchase of medical books for the Departments of Pathology and Physiology.

Hick, Regent William H., a meteorite found at Rochester, N.Y. This meteorite has been installed at the Lick Observatory.

Class of 1885, The, a book fund, eventually to be placed in the hands of the Regents, the income to be used for the purchase of books for the University Library, the money remaining for the present in the hands of trustees.

Class of 1905, The, a marble bench of California marble from the Columbia quarries in Tuolumne County, to commemorate the granting of self-government to the students by President Wheeler.

Class of 1909, The, Class of 1909 Loan Fund. On June 13, 1911, the Regents acceded to the request of the Class of 1909 that the income of the Class of 1909 Loan Fund of \$1,200 be payable thereafter to the secretary of the class for the class expenses. The entire principal, instead of \$1,100 only, as before, by request of the class was made available for loans to students. The terms of the gift were as follows: "The sum of \$1,200 shall be deposited with the Board of Regents of the University in perpetual trust as a loan fund for worthy students. All necessary provisions for the administration of the loan fund shall be made by them, provided that the interest accruing from this fund shall be payable to the permanent secretary of the class to be used for class purposes, as long as the class shall have use for it."

Class of 1911, The, Class of 1911 Loan Fund (which on June 30, 1911 amounted to \$1,001.93), the endowment being accepted subject to the following conditions:

"That the sum of one thousand (\$1,000) dollars be immediately accepted by the Regents to be pooled with the general funds of the University and the interest thereon paid semi-annually to the permanent treasurer of the class; that the Regents further shall accept the balance remaining in the hands of the class treasurer on September 1, 1911, as a loan fund to be loaned to deserving students at the discretion of the following, who shall constitute the trustees of the 1911 loan fund, to wit: the President of the University, and one person named by him, and the President of the Associated Students of the University of California; that such loans bear interest at 6 per cent per annum from the date at which the recipient shall leave the University, such interest to be accepted by the Regents for the Class of 1911 and to be turned over semi-annually to the permanent treasurer; after the death of the last surviving member of the class, or, at the latest, with July 1, 1960, the income of the whole Class of 1911 Fund to be used for such educational or scientific purposes as the Regents may appoint."

Denicke, Mrs. E. A., \$40, to bring the income from the Denicke Fund for Germanic Philology up to one hundred dollars for the current year.

Doyle, M. J., a collection of woods, for the Botanical Museum, including the following: 160 Japanese woods, 31 Honduras woods, 10 woods from Jerusalem, 72 South American woods, in squares, 10 woods from Honduras, Australia, the West Indies, Hawaii, and Tasmania, 96 woods from India and North America, 19 woods from Mexico, California, and Colorado, and 109 miscellaneous woods: total of 569 specimens.



- Durst, M. H., \$100 for the purchase of an electric air compressor and necessary appurtenances for the Students' Infirmary.
- Fowler, Mrs. Margaret B., (and Miss Kate Fowler), \$300 for promotion of research in protozoölogy and parasitology.
- Friend, A., \$200 a month for five years from January 1, 1911, for palaeontological research, under the direction of Professor J. C. Merriam, with the understanding that the sum appropriated already by the University for research in palaeontology should not be diminished by reason of this gift.
- Friend, A., \$1,000 for the payment of the salary of Miss Lucy Stebbins, Assistant Dean of Women, for the period from November 1, 1910, to June 30, 1911.
- Friend, A., \$500 for equipment and for the payment of wages in the diet kitchen of the University Hospital, making possible an excellent course in dietetics for the nurses in the training school.
- Friend, A., \$349 as a student loan fund, to be known as the "Grubstake W. Loan Fund."
- Friend, A., \$125 for the provision of a scholarship.
- Friend, A., \$50 for the purchase of books in medicine.
- Graduate of the University, A., \$50 for the purchase of books, as a gift to the Department of Latin, this sum being a prize received by him at an Eastern college.
- Ginn Fund Scholarships in the Wilmerding School, supported by the income of the Ginn Fund: \$1,045.20, which was expended for the maintenance of five boys, all students of the Wilmerding School of Industrial Arts.
- Hart, Mrs. H. H., three rare eighteenth century wood blocks, used in making old Japanese colored prints, designed by the famous masters Shigemasa and Okamura Masanobu.
- Hartmen, Miss Genevieve, of the Class of 1911, an autograph letter from Henry W. Longfellow, written to her mother in 1881.
- Hatch, John, of Rusutu, Rhodesia, South Africa, the skull of a large African leopard, for the Department of Zoology.
- Hearst, Regent Phoebe A.: Portraits of Senator George Hearst and of Mrs. Hearst, done in oils by the Swedish artist, Mr. Carl Oscar Borg; of these, the former has been hung in the Hearst Memorial Mining Building, and the latter in Hearst Hall.
- \$1,000 for printing Publications of the Lick Observatory.

\$1,000 for the purchase by Professor H. Morse Stephens, in Spain of books, manuscripts, copies of manuscripts, etc.

A swimming pool for the Lick Observatory at Mount Hamilton, to be constructed at a cost of between \$2,300 and \$2,500.

\$500 toward the fund of the Class of 1910 for constructing a concrete foot bridge across Strawberry Creek, between East Hall and the Faculty Club.

\$100 for storage charges on a valuable collection of laces, fans, embroideries, silver, etc., given by Mrs. Hearst, deposited with the Mercantile Trust Company of San Francisco.

\$3,000, being the first portion of a total gift of \$4,500, representing the cost of the permanent finishing of a new road from the Mining Building south to the Philosophy Building.

Hendy, Joshua, Machine Works, an improved form of ore feeder, for the Department of Mining.

Howard, Mrs. Charles Webb, for the Laboratory of Agricultural Chemistry, an outfit of chemicals and chemical glassware, two retorts, copper water bath, a percolator, etc.

Johnston, Albert Sidney, Memorial Scholarships: An endowment of \$3,500 for the Albert Sidney Johnston Memorial Scholarship was tendered to the Regents on August 9 by Albert Sidney Johnston Chapter, No. 79, of the United Daughters of the Confederacy, the income to be devoted to the maintenance of a scholarship for son or descendant of a Confederate veteran, or of a Daughter of the Confederacy. The deed of gift of August 9, 1910, was, in part as follows:

The said principal sum shall be kept as a permanent fund to the said Regents, and may be invested and re-invested by them; in their judgment they shall deem best. The annual income derived therefrom shall be devoted to the maintenance of a scholarship which shall be known as "ALBERT SIDNEY JOHNSTON MEMORIAL SCHOLARSHIP."

Said scholarship shall be awarded annually, or otherwise, as often as a vacancy shall exist therein, to some needy and deserving person of either sex who shall have complied with the entrance requirements of the University of California, for the purpose of assisting such person to pursue courses of study and to acquire an education at the said University of California.

Provided, however, that the person to whom such scholarship shall at any time be awarded, in addition to fulfilling the other requirements herein stated and such as shall from time to time be prescribed by the authorities of the said University of California, shall be a descendant of a Confederate veteran, meaning thereby a person who shall be a descendant of one who served in a military capacity in the Armies of the late Confederate States of America; or shall be a descendant of a Daughter of the Confederacy, meaning thereby a descendant of a person who has been a member of the order or association known and designated as United Daughters of the Confederacy, or of some branch or Chapter thereof.

The said Chapter, that is to say, Albert Sidney Johnston Chapter No. 79, United Daughters of the Confederacy, shall have the right, so long as it shall remain a corporate body, to nominate to the President of said University of California the beneficiary of the said scholarship annually, or as often as there shall be a vacancy therein, such nominee in each instance being required to comply with the entrance and all other requirements of the University of California before becoming entitled to the award of such scholarship and the award thereof being thereafter made by and subject to the approval of the said Regents, the President, or the Faculty of the said University of California, according as the power to make such awards shall from time to time be vested.

Should the said Chapter at any time cease to be a corporate body, then the right to make such award shall pass absolutely to the Faculty of the said University of California, or to such part thereof as may from time to time be designated by it or by the President of the said University for the making of such awards, with the request in such event that if there be two or more eligible applicants for the scholarship at any one time such award be made to the most needy applicant.

The said Regents or other agents of the said University of California having in charge the awarding of the said scholarship may require from the beneficiaries, who may from time to time hold the same, a promise or obligation to return the amount of money received under said scholarship, if any of said beneficiaries are able to return said amount received.

In the event that the said principal sum shall, through additional funds given by the donors herein or through addition from any source whatsoever, equal twice the amount hereby given, then the said Regents may in their discretion divide the income thereof into two or more scholarships, none of which shall consist of the income of less than the principal sum herein; such additional

scholarships to be known by the name and governed by the conditions herein set forth.

A resolution adopted by the said Regents at any meeting, signifying an acceptance hereof shall be deemed sufficient to that end.

The donors requested, although the request was not made a condition of the endowment, that in case the scholarship should not be awarded in any year, that the income for that year be added to the principal.

On September 13, the deed of gift was formally accepted by the Regents, in accordance with its terms. The scholarship for 1910-11 was awarded to Owen N. Jones, of San Francisco.

Jones, Wyatt W., of Redding, California, his entire herbarium, consisting of 3,565 sheets of plants, mostly from Montana.

Kellogg, Mrs. Martin, the Martin Kellogg Fellowships. Upon the death of Mrs. Martin Kellogg, twenty 6 per cent bonds of the Tonopah United Water Company, of the par value of \$1,000 each, were transmitted from Mrs. Kellogg's attorneys to Director W. W. Campbell of the Lick Observatory. These bonds were then transferred to the University by Dr. Campbell as an endowment for the Martin Kellogg Fellowships in the Lick Observatory, a memorial to the former President of the University.

Knights of St. Patrick, The, \$100 for the purchase of Irish books for the University Library. It is their intention that the gift shall be continued annually.

Lehmer, Professor D. N., a copy of his factor tables for the first ten million numbers, published by the Carnegie Institution of Washington (for the Department of Mathematics).

Leyner, J. George, Engineering Works Co., The, of Colorado, a water Leyner drill, a water tank, a tripod, complete, with weights, and other articles of engineering equipment, for the Department of Mining.

Luvandowski, Mrs. Elwin, (and friends) a complete set of the works of Professor Richard Burton of the University of Michigan, Lecturer in the Summer Session.

Meyer, Eugene, Jr., \$2,000, the income is to be used for the purchase of books on history, with the provision, however, that this income may, in the discretion of the Board of Regents or some committee of the Board, with the consent of the head of the Department of History, be diverted occasionally to another purpose of kindred nature which may appear to need the money more.



- Miller, Mrs. Eliza M., of Santa Barbara, bequeathed to the University Y. W. C. A. \$5,000, "to be and constitute a permanent fund to be invested and the income only to be used in paying the salary of the secretary of said association." The Regents on May 9, 1911, voted to hold this \$5,000 for the University Y. W. C. A., the income thereof to be paid over to the University Y. W. C. A. by the Regents for the payment of the salary of the secretary of the organization.
- Mills, Ogden, \$15,000, in two annual gifts of \$7,500 each, for the continuance of the work of the D. O. Mills Expedition to the Southern Hemisphere, from the Lick Observatory. Mr. Mills generously increased the yearly amount available for the support of the expedition from \$6,000 to \$7,500 to allow for higher salaries and maintenance expenses, on account of the increased cost of living.
- Mitzmain, M. D., of Manila, P. I., seven preparations of the "Surra disease" of the cattle of the Philippines.
- Moody, Professor and Mrs. R. O., 11 volumes, 50 pamphlets, 3 photographs, 78 microscopical preparations, and 48 samples of infusorial earths from various parts of the world, once the property of the late Professor E. W. Claypole of Buchtel College, for the Department of Zoology.
- Moses, Professor Bernard, two volumes by Julio Banades Espinosa: "Balmaceda, su Gobierno, y la Revolucion de 1891," also a set of the "Registro Nacional de la Republica Argentina" in 52 volumes, for the Library.
- Neuhaus, Karl Eugen, a design for a book plate for the Willard Bradley Rising Library.
- Page, G. H., a collection of Indian relics from the Dawson region in Alaska, for the Museum.
- Paraffine Paint Co., The, a barrel of asphalt to be used in the construction of the Swimming Pool.
- Redding, Joseph D., a copy of the complete score of the opera Natoma, being number 22 of a special edition of 250 copies printed on Old Stratford Paper and signed by the composer and author.
- Rising, Mrs. Frances Lawrence, the chemical library of her late husband, Professor Willard Bradley Rising.
- Rodger, Rev. J. G., a set of Chinese woodcuts, from which the Old Style Examination Papers were struck, found by him at Nanking Examination Hall, December 7, 1909.
- Roessler & Hasslacher Chemical Co., The, a collection of dyes and literature pertaining thereto, for the Department of Chemistry.



Royal Prussian Minister for Public Instruction, The, a copy of the "Geschichte der Königlichen Universitätsbibliothek zu Berlin," by Dr. Friese.

Russian Circle of the University of California, The, (a student organization) a number of Russian books for the University Library.

San Francisco Gas & Electric Co., a gas range for a diet kitchen at the University Hospital.

Sather, Mrs. Jane K., the Sather Campanile: In a letter of February 10, 1911, from Mrs. Jane K. Sather to President Wheeler, which was presented to the Regents on March 14, 1911, Mrs. Sather stated that she had deeded to President Wheeler, as her trustee, the land and building at the southwest corner of Washington and Fourteenth streets, Oakland, the property to be sold after her death, and the proceeds, after the payment of certain minor gifts to relatives and friends, to go for endowing the chair of history in the University of California. Mrs. Sather stated, further, that since the property had greatly increased in value since that time, she would request that the moneys resulting from this gift be lumped with the endowment which she had already given for the Sather Chair of Classical Literature, amounting at June 30, 1911, to \$70,805, and with an additional trust fund of \$10,000 for the Sather chair; and that the lump fund so created be devoted "first and primarily, to the erection of the Campanile, and second, whatever sum is not required for that purpose, equally to an endowment fund for the classical chair and to an endowment for the chair in history." The Regents thereupon adopted a resolution declaring: "That the Board of Regents of the University of California so far as they legally can do hereby accept said proposed change, and agree to hold hereafter such of said gifts as they have already received, and to hold when received such of said gifts as they may hereafter receive, for the purposes specified in said communication and in accordance therewith."

Sather, Mrs. Jane K., a portrait of herself, painted by William Keith.

Shreve & Co., a specimen of benitoite (the California gem mineral discovered a few years ago) in matrix.

Smith, F. M., two skeletons, recently obtained in excavations on Long Island, and ten volumes on the ethnology of the Long Island region.

Villegas, Jorge, the skull of a Chilean puma killed in 1883 in Los Peamos, Department of Victoria, Province of Santiago.

Warren, Rev. J. B., thirty-nine small birds and three mammals from California, to the Museum of the Department of Zoology.

Watson, Professor Archibald, of the University of Adelaide, Australia, the tooth of an Australian alligator, for the Department of Zoology.

Whitaker, Horace, Whitaker's Forest: On August 9, the Regents formally accepted the big tree timber lands in Tulare County presented by Horace Whitaker, subject to the conditions contained in the following deed of July 26, 1910:

Witnesseth: That said party of the first part hereby gives and grants, conveys and confirms unto the said party of the second part, in trust for the University of California, all those certain lots, pieces or parcels of land situate, lying and being in the County of Tulare, State of California, and particularly described as follows, to wit:

The Southeast quarter of Section Sixteen (16); the North half of the Southwest quarter and the Southwest quarter of the Southwest quarter of Section Fifteen (15); and the Northwest quarter of the Northwest quarter of Section Twenty-two (22); all in Township Fourteen (14) South, of Range Twenty-eight (28) East, Mount Diablo Base and Meridian, together with all and singular the tenements, hereditaments and appurtenances thereunto belonging or in any wise appertaining, and the reversion and reversions, remainder and remainders, rents, issues and profits thereof.

This deed is expressly made subject to the following reservations hereinafter set forth, and upon the failure of said party of the second part to do and perform and carry out the purposes and intents for which the real property herein described is conveyed, or in case of any violation of the reservations herein made, said property herein shall immediately revert to said party of the first part, his heirs, executors, administrators or assigns.

#### Reservations:

1. Said party of the second part shall have and hold said lands and premises in its present condition for forestry investigation, and research connected with that branch of instruction as taught in the University of California and that it be preserved and continued as a park and pleasure resort for the people of the State of California.

2. That no whiskey or other intoxicating liquors shall ever be sold or dispensed on said premises.

3. That said land and premises shall be used as a public park for campers, and that no charge shall be made or collected from any person who uses the same for camping purposes, but regulations may be made governing persons while camped on said premises.

4. That said land shall not be used for a stock range, but campers may keep thereon the necessary stock for their camping purposes.

5. That no Sequoia or Redwood trees growing or that may grow on said premises shall be felled or cut down.

6. Said first party reserves the right as long as he shall live to cut, use, and remove from said premises any and all dead or fallen timber.

7. These lands and premises shall be known as and called "Whitaker's Forest."

In Witness Whereof, the said party of the first part has hereunto set his hand and seal the day and year first above written.

This land contains a fine grove of Sequoia Gigantea, and besides the "big trees" has an abundant growth of yellow pine, sugar pine, cedar, fir, and other trees.

Other lands: It was reported to the Regents on October 11, 1910 that Horace Whitaker had executed a deed conveying to the Regents the following lands in Tulare County:

All of Section Thirty-six (36), in Township Fifteen (15) South Range Twenty-five (25) East: South half of the Southwest quarter of Section Thirty (30), and the West half of Section Thirty one (31), in Township Fifteen (15) South, Range Twenty-six (26) East.

The North half and Southwest quarter of Section One (1), South half and South half of North half of Section Two (2), and East half of the Southeast quarter of Section Three (3), and the East half of the Northeast quarter of Section Eleven (11) in Township Sixteen (16) South, Range Twenty-five (25): the Northwest quarter, Northwest quarter of the Southwest quarter and Southwest quarter of Northeast quarter of Section Six (6), in Township Sixteen (16) South, Range Twenty-six (26) East, all of Mount Diablo Base and Meridian.

On the death of Mr. Whitaker immediately thereafter, his heirs contended that no delivery of the deed had taken place. They remain still in possession of the land.

The land referred to is 2,640 acres near Orosi. It was Mr. Whitaker's home ranch, and is distinct from the "big tree" timber land, "Whitaker's Forest," which was given to the University by him before his death.

Women's Christian Temperance Union of Berkeley, The, \$50 as a prize to be awarded to the student of the University writing the best essay on the subject: "The Relation of Individual Total Abstinence to the Prosperity of the Nation."

NOTE: See also the list of gifts appearing in the statement of income for 1910-11, page 407.

## 1911-12

Alexander, Miss Annie M., \$10,512.04 for the support of the California Museum of Vertebrate Zoology, for the year ending June 30, 1912.

Alpha Zeta Fraternity, \$25 toward the Hilgard Memorial Fund.

Alumni Association of the California College of Pharmacy, \$235 for a marble chair for the Greek Theatre, in memory of Dean William M. Searby.

Associated Students, The, Land Needed for the New Track Site: On December 22 the following recommendations of the Committee on Grounds and Buildings were approved:

"That the Regents accept the offer of the Associated Students to donate to the University four lots and the houses thereon at the corner of Sylvan Way and College Avenue:

"That in accepting the gift the Regents recognize that it is the desire of the Associated Students to use the land between California Field and College Avenue, and between Bancroft Way and the Infirmary, as a running track, and that it is the intention of the Regents to use this land as a site for a running track;

"That acceptance by the Regents be preceded, however, by a statement from the architect that such use of this region is in accord with the Phoebe A. Hearst Permanent Plan; also that the property be deeded to the Regents without conditions; and also that the Associated Students of the University of California undertake themselves to pay for the land, to pay for the removal of the buildings on the proposed track site and their establishment on such sites as the Regents may designate, and to finance themselves, as well as these matters, the development of the site as a running track."

The following letter of December 14, 1911, was written in behalf of the Associated Students of the University of California by Dr. Milton T. Farmer, Graduate Manager:

"I take pleasure in stating that the Executive Committee of the Associated Students at its regular meeting last evening formally expressed its approval of the understandings set forth in your letter



of December 13 in the matter of the running track. We discussed in detail the conditions expressed in the recommendation of the Buildings and Grounds Committee and the recognition herein contained that the students desire the use of this land for a running track and that the Board of Regents should declare it their intention to so use this land and further we particularly noted that the land upon purchase is to be donated by the students and all improvements and removal of buildings paid for by the students. All of these points were endorsed unanimously by the Executive Committee."

It was reported to the Board on December 22 that it was the opinion of the architect that the proposed track site is the best adapted on the campus for a new running track.

On December 22, the Regents agreed to keep as a separate fund the rentals received from the four houses at College Avenue and Sylvan Way given by the Associated Students, and, after deducting the expense of repairs and maintenance, to retain the balance as moneys available to be drawn upon eventually for the work of construction of a new track.

Associated Women Students, with the aid of a number of friends of the University, \$1,912.54, deposited with the Regents to the credit of the Women's Dormitory Fund.

Associated Women Students, Women's Senior Hall, erected at a cost including equipment, of more than \$4,000.

Atkins, J. Henry P., a handsomely bound collection of photographs of landscape paintings by his brother, the late Arthur Atkins.

Barlow, Dr. W. Jarvis, donations to the milk depot of the Los Angeles Medical Department.

Brewer, Miss Henrietta Foster, (and her mother and sister) the law library of their brother, the late John Abernathy Brewer, comprising about 350 volumes, for installation in Boalt Hall of Law.

Carnegie Foundation, various retiring allowances for professors and for widows.

Cebrian, J. C., a collection of Spanish books numbering more than 90 volumes (later supplemented by as many more); the collection includes works on Spanish bibliography, philology, the history of Spain in relation to America, architecture, miscellaneous subjects such as folk-lore, sociology, science, minor arts, etc., etc., and a number of rare old books, among them the first Spanish translation of Dante's *Inferno* in 1515, the first *Cyclopaedia* ever written (7th century) by San Isidoro of Seville, printed in 1580; a treatise of



Anatomy, of 1545, and other books of the sixteenth century; a facsimile of the first edition of Don Quixote (1605 and 1615), the first complete work ever published in facsimile; and a dozen other books of the 17th and 18th centuries.

Class of 1881, The, \$1,005 as the nucleus of a fund to be known as "The Loan Fund of the Class of '81," to be administered under the following conditions: (a) The fund is to be available for fully matriculated students in the University; (b) Student notes to bear interest at the rate of four (4) per cent per annum from the time the borrower graduates or leaves the University; (c) All details of the administration of the fund to be determined by the President of the University and the Advisor.

Class of 1887, The, \$400, the income of which is to be used for the purchase of books for the University Library.

Class of 1890, The, \$225 for the erection of a marble chair in the Greek Theatre to the memory of Professor Joseph LeConte.

Class of 1898, A member of the, \$200, to be used as a student loan fund.

Class of 1903, The, approximately \$225 for a marble chair to be set in the Greek Theatre, in honor of President Wheeler.

Class of 1905, The, a marble chair, to be placed in the Greek Theatre, in honor of Professor H. Morse Stephens.

Cowell, Ernest V., '80, bequest: By the will of Ernest V. Cowell, '80, \$750,000 was bequeathed to the University of California, one-third for a stadium on California Field, one-third for a gymnasium, and one-third for a hospital on the grounds at Berkeley. The will, which was dated January 9, 1911, and filed April 17, 1911, in San Francisco, was in part as follows:

"I desire that all my one-fourth interests in the various Cowell properties be converted into cash within seven years, and that until such distribution, the properties are to pay my wife, Alice M. Cowell, the sum of one thousand dollars in gold coin in the first of every month. At the end of said seven years she is to receive the income from two hundred and fifty thousand dollars as long as she may live. At her death the said two hundred and fifty thousand dollars is to be paid the Regents of the University of California for the purpose of building a hospital on the grounds at Berkeley. Third: As soon as the money becomes available two hundred and fifty thousand dollars is to be paid to the Regents for the purpose of building a students' gymnasium on the grounds at Berkeley. Fourth: Two hundred and fifty thousand dollars are to be paid the Regents of the University of California for building a Stadium on

California Field. Eighth: To the Cowell Scholarship committee of Santa Cruz the sum of ten thousand dollars for additional funds for the University Scholarship Students. Ninth: In order to provide for the payment of the minor bequests as soon as possible I direct that as much of my one-fourth interest in the Cowell properties as may be necessary to pay such bequests shall be so within one year. Tenth: That the affairs of the Cowell Company shall in no wise be interfered with, I hereby direct that if all the bequests are paid within seven years from the date of my death it will not be necessary that any more of my interests be sold than will carry out these bequests. Whatever remains after paying the bequests and final settlement is to become the property of my brother and sisters. If none survive then the property to go to the Regents of the University of California to erect and maintain such hot houses and flower gardens as will beautify the grounds of the University of California at Berkeley to the greatest advantage."

Davis, William R., '74, \$5,000, the income of which is to be devoted to the maintenance of a perpetual scholarship in the University of California, to be awarded from time to time "to such worthy student of the University, of either sex and a bona-fide resident of the State of California, as shall be deemed worthy and in need of such assistance."

Davis, William R., '74, \$250 to provide a marble chair in the Great Theatre in honor of Professor Joseph LeConte.

de Fremery, Mrs. James L., a collection of Dutch books, comprising over five hundred volumes, on Dutch history, antiquities, numismatics, heraldry, and law, with several seventeenth and eighteenth century editions of Dutch authors, illustrated by the Dutch engravings of that period; and a number of modern Dutch books and dictionaries (for the University Library).

Denicke, Ernst A., The Executors and Heirs of the Estate of, (Mrs. I. Denicke, Regent F. W. Dohrmann, Frederick A. Denicke, Mrs. I. Denicke Leuschner, and Ernest H. Denicke), as a memorial to Regent Ernst A. Denicke, the sum of \$5,000, to be used as the Ernst A. Denicke Faculty Loan Fund, subject to the following conditions, as approved by the Regents:

"The purpose of this fund shall be to make loans to the members of the faculty of the University of California, either from the principal or the income of this fund. This fund shall be administered by an Executive Board consisting of the President of the University of California, the Dean of the Faculties of the University of California and Regent F. W. Dohrmann, during his regency."

At the termination of Mr. Dohrmann's regency a Regent shall be elected annually by the Board of Regents to serve in his place. This Executive Board shall determine in what manner, upon what terms, and in what amounts loans shall be made to members of the faculty. This Board shall have full power in the administration of this fund, and the income derived therefrom, and shall not include in its reports the names of those to whom loans have been made."

**Ernst A. Denicke Memorial Fund:** On November 14 the following procedure for the management of the Ernst A. Denicke Memorial Fund was approved: "That the moneys loaned from this fund to members of the faculty, upon approval of an Executive Board, consisting of the President of the University, the Dean of the Academic Faculties, and a representative of the Regents, this representative being at present Regent Dohrmann, shall be paid to a member of the Executive Board, or to the President's Secretary, this person then turning over the money for the loan to the borrower; the voucher, that is to say, not being drawn in the name of the individual borrower. The notes given by the borrowers will be deposited at the Office of the Secretary of the Regents, as is done with notes for loans made from student loan funds."

The following rules were adopted by the Executive Board of the Ernst A. Denicke Memorial Fund; they are subject to change by the Executive Board:

**Executive Board:** The President of the University, the Dean of the Faculties, and Regent F. W. Dohrmann.

**Purposes:** Both principal and income may be used for loans to members of the faculty. Loans not exceeding \$100 in amount may be made to any member of the faculty upon approval of the President of the University and the Dean of the Faculties, or in the absence of either of these, by the one who is present, subject to approval by the Regent who is a member of the executive board. Loans exceeding \$100 in amount, or under conditions not provided for herein, shall be passed upon by the entire Executive Board.

**Interest Rate:** Six per cent.

**Term:** One year, if the borrower will agree to make installment payments; six months, if the borrower expects to repay the loan in one amount instead of installments.

**Denicke, Mrs. Ida, \$1,000,** to be added to the E. A. Denicke Library Fund, founded by Regent Denicke.

**Bois, Miss Helen J.,** a graduate of the University of the Class of 1903, bequeathed one-third of her estate to the University, "the income to be used by the Regents to pay the expenses, while under-

taking courses of study in the University, of such worthy individuals as could, by reason of financial disability, not easily obtain an education in another way. The details of management and apportionment of such funds I leave to the direction of the Regent of said University.''

Friend, A, \$200 for the University Hospital, to be used for the payment of hospital charges against patients compelled to stay longer than they anticipated at the time of admission and unable to meet the added expense.

Friend, A, \$100 to be used for the payment of a salary for a seventh freshman advisor for women.

Friend, A, \$225 for the purchase and installation of an incinerator for the University Hospital.

Fugazi Casa Coloniale Italiana, The Board of Directors of the, \$100 for the purchase of books for the architectural library. This gift was in token of appreciation of services rendered by the University through Professors Howard, Kower, and Hayes, in serving as a tribunal for the award of a prize in the competition for architectural plans for the Fugazi Casa Coloniale Italiana.

Ginn Fund Scholarships in the Wilmerding School, supported by the income of the Ginn Fund (the principal of which on July 1, 1914 amounted to \$47,166.03): \$1,029.85, which was expended for the maintenance of five boys, all students of the Wilmerding School of Industrial Arts.

Hart, Mrs. H. H., of Berkeley, bequeathed her residence in Claremont to her husband, with the request that he should in turn leave it to the University, for use as an art gallery.

Hart, Mrs. M. G., a copy of the Ulster County Gazette dated January 4, 1800 (Vol. 2, No. 88), containing, among other things, an account of the meeting of the American Congress of December 1, 1789, the resolutions of the Senate and the answer of President John Adams on the occasion of the death of George Washington.

Havens, F. C., one thousand Monterey pines, to be planted on the hill of the eastern part of the campus.

Hearst, Regent Phoebe A., the cost of insurance for three years, the amount of five or six hundred thousand dollars, for the museum collections; the cost of this insurance will be between five thousand and seven thousand dollars; Mrs. Hearst defrayed, also, most of the cost of maintaining the anthropological collections.



An offer of \$2,500 as a gift toward the cost of building a women's swimming pool.

\$2,400 for the maintenance of the Hearst Scholarships for 1911-12.

An offer of \$1,000 per annum to increase the salary of the Professor of Architecture, as Supervising Architect, beginning July 1, 1912.

A valuable collection of early prints, missals, manuscripts, and the like, making fifty-five volumes in all, together with a special exhibition case for their display, for the University Library.

\$500 as the first payment on her gift of approximately \$2,500 for the construction of a swimming pool at the Lick Observatory.

A totem pole from the Queen Charlotte Islands, in value about \$500, together with the cost of transportation and erection—also about \$500. The pole, which has been placed in front of the Museum of Anthropology, is the largest of its kind in California.

\$400 for the purchase of additional apparatus for the Women's Gymnasium.

A promise to contribute toward the cost of planting and further improvement of the grounds around the Mining Building.

Anderson, Victor H., '00, \$50 toward the library fund of the Class of 1900.

Hesse Memorial Committee, The, (consisting of alumni and friends of the University), a house and land at 157 Santa Clara Avenue, Oakland, valued at approximately \$4,000. The Regents on December 22 accepted this gift, "subject to the condition that the property may be occupied, rent free, by the three daughters of the late Professor Hesse, so long as they survive; the property then to be disposed of by the Regents as they see fit and the proceeds to be held as an endowment for the Hesse Scholarship (in the College of Mechanics)." The Hesse Memorial Committee consisted of Messrs. F. W. Bradley, Ross E. Browne, Charles Butters, S. B. Christy, C. L. Cory, William Carey Jones, Hermann Kower, James K. Moffitt, and F. Slate.

On March 12, 1912, President Wheeler presented to the Regents the following statement of January 15, 1912, as delivered by the Hesse Memorial Committee to the Regents of the University:

"The undersigned, the Hesse Memorial Committee, in accordance with your resolution of December 22, 1911, herewith presents to you a deed, conveying to you the house and land known as No. 157 Santa Clara avenue, Oakland, California, to be taken by you and held upon the following conditions:



"Miss Bertha Hesse, Miss Florence Hesse, and Miss Estelle Hesse, the daughters of the late Professor Frederick Gotfried Hesse, are jointly to have the use of the house and land during the life of the longest liver of them, with the privilege of renting the property if they so desire. They are, however, to keep the property unimproved, making all necessary repairs, and are, at their expense, to keep the property insured in such an amount and in such companies as the Regents may designate, loss, if any, to be payable to the Regents. They are also to pay any taxes or assessments against the property. In other words, the Regents are not to be called upon for any expense in connection with the property during the life of any of the Misses Hesse. Upon the death of the last survivor of the Misses Hesse, the property is to be sold by you and the proceeds devoted to the establishment of a scholarship, to be known as the 'Hesse Scholarship,' the income thereof to be used for the support of a student or students, in the College of Mechanics at the University of California, under such regulations as you may from time to time prescribe. In case at any time the principal of the fund so created shall not, in your opinion, be sufficient, you shall have the right to accumulate the income and add it to the principal until the latter is, in your opinion, sufficient. (Signed), Ross E. Browne, J. J. Moffitt, Frederick Slate, C. L. Cory, William Carey Jones, Herman Kower, S. B. Christy, F. W. Bradley, Charles Butters (Committee).

Hilgard bust: pupils, friends, and other admirers of Dr. Eugene Woldmar Hilgard, Professor of Agriculture, Emeritus, during the year made gifts of \$514.85 to provide a bronze memorial bust of Professor Hilgard for the new Agricultural Hall. Donors during the year were as follows:

Alpha Zeta	Emmett, M. L. Jr.	McMurray, O. K.
Anderson, L. R.	Filcher, R. M.	Markley, J., Jr.
Babcock, E. B.	Forbes, C. N.	Meinecke, E. B.
Beaser, M. S.	Foster, R. H.	Merrill, F. D.
Bioletti, F. T.	Gayley, C. M.	Mitchell, L. S.
Bishop, R. K.	Hall, J. R.	Morgan, D. N.
Boke, G. H.	Hart, William	Newman, J. G.
Bonner, C. G.	Healey, C. A.	O'Neill, E.
Bowles, P. E.	Heller, E. S.	Packard, W. E.
Bridgman, L. B.	Henderson, V. H.	Pitzinger, W. C.
Bullock, A. A.	Holin, H. C.	Reinhardt, G. F.
Carry, H. W.	Holter, M. E.	Roadhouse, C. L.
Chan, Chung Seen	Horne, W. T.	Robertson, R. D.
Christy, S. B.	Howard, Mrs. E. S.	Roeding, G. C.
Clark, G. T.	Jones, J. S.	Rogers, F. L.
Cook, A. J.	Jones, K.	Rossi, E. A.
Dillman, M. J.	Kellogg, F. B.	Rossi, R. D.
Durst, W. H.	Louderback, G. D.	Russell Bros.
Eckart, C. F.	Loughridge, R. H.	Schurtz, J. W.

Sedgwick, T. F.	Soulé, F.	Vaygouny, M.
Senger, J. H.	Stratton, G. M.	Waite, M. E.
Setchell, W. A.	Stubenrauch, A. V.	Walters & Nixon
Shima, G.	Sumner Ranch	Wheeler, President Benj. Ide
Shuey, R. A.	Swingle, M. E. & G. K.	Whitney, D. J.
Slate, F.	Talbot, P.	Wickson, E. J.
Smith, R. E.	Thompson, Alice R.	Wyatt, J. O. B.
Soares, A. G.	Turner, F. C.	

Howard, Mrs. Emma Shafter, \$50 for the Hilgard bust, the gift being in memory of her son, Karl Shafter Howard.

Hume, Samuel J., '08, seventeen bound volumes of the Sacramento Record Union, for the Academy of Pacific Coast History.

Imperial County, by vote of its Board of Supervisors, and a number of individual citizens of the Imperial Valley joined in presenting to the University twenty acres of land at Meloland, as a site for the Imperial Valley Agricultural Experiment Station, for the support of which, for 1911-13, the Legislature had appropriated \$15,000. The Supervisors have agreed to present to the University an additional ten acres in 1912, and still another adjoining ten acres in 1913. In accepting the gift, the Regents on November 14 approved the following recommendation of the Committee on Agriculture:

"In justice to the donors of the land, we recommend that the University, in accepting the deed, agree to return the land to the Supervisors of Imperial County in case, for any reason, the station should in future be discontinued."

The land was at once placed under cultivation for experimental work in desert agriculture, an irrigation system provided, and barns and office, laboratory, and dwelling accommodations provided. The individual donors toward the fund for the purchase of the site were as follows: W. F. Holt, \$225; Harold Bell Wright, \$125; Geo. L. Melton, \$75; H. C. Gridwold, \$50; King Kendle, \$50; Monroe Eddy, \$50; Albert Hart, \$50; C. E. Gage, \$50; A. G. Ingram, \$50; G. L. Crocker, \$25; Paul Maul, \$25; John Stuart, \$25; Ed. Bellwood, \$25; Sam Wise, \$25; J. M. McClean, \$25; C. P. Randolph, \$25; total, \$900.

gersoll-Rand Rock Drill Co., machines and other equipment totalling more than \$500 in value, and one hundred circulars explaining to students the operation of the machines.

gersoll-Rand Rock Drill Co., four of the latest forms of air hammer drills, in value several hundred dollars (for the Mining Department).

Irving, S. C., '79, five bonds of the Bohemian Club, the income thereof to be used as an annual prize to be awarded to a member of the student body for the best anecdote, story, poem, or drawing illustrative of American wit and humor.

Knights of St. Patrick of San Francisco, The, \$100, their second annual contribution for the purchase of Irish books for the University Library.

Lange, Prof. Alexis F., 129 volumes, chiefly elementary or high school text books, and 222 pamphlets and unbound numbers of periodicals, chiefly Modern Language Notes.

Levi Strauss Co. of San Francisco, \$3,500 for the maintenance of the Levi Strauss Scholarships for the year 1911-12.

Los Angeles Medical Department, The Faculty of the, \$1,263.81, to make up the deficit in the expenses of the Department for the fiscal year ending June 30, 1911.

Lunkenheimer Co., of Cincinnati (for the Mining Department), fifteen standard forms of valves, many of them bronze and all representing the best types used in mining plant construction, in value at least two hundred dollars.

Merritt, Dr. Emma S., trustee, transmitted to the University \$1,000 to be available for a year and a half as a loan fund for students, and the gift was reported December 22 to the Regents; in so far as the money is repaid by that time it is to be given over to Dr. Merritt as trustee for the donor (who desires her name withheld). the University exercising care and discretion in making loans, but assuming no other responsibility for their repayment on the day of promise. In view of these conditions, it was voted, on recommendation of President Wheeler:

(1) That the \$1,000 be accepted, to be used as a loan fund for students until May 30, 1913, when the unloaned portion and the repaid sums shall be returned to Dr. Merritt; sums then due but not paid, if there be any such, to be similarly returned as they come in. (2) Loans to be available to senior students only, in the academic departments at Berkeley. (3) Borrowers to sign notes promising repayment not later than May 31, 1913, that is, one year from the date of graduation of members of the present Senior class. (4) Loans to be without interest. (5) The Committee of Award to consist of the Advisor, the Secretary of the Regents, and the President of the University. (6) The fund to be known as the "Special Senior Class Loan Fund—Academic year 1911-12."

ills, Ogden, a promise to provide \$15,000 to support the work of the D. O. Mills Expedition to the Southern Hemisphere, from the Lick Observatory, during two additional years, 1913 and 1914, at the rate of \$7,500 per year.

\$5,000 for support of the D. O. Mills Expedition to the Southern Hemisphere, under the direction of Astronomer Joseph H. Moore. The results achieved by the Mills Expedition, together with the work conducted at the Lick Observatory, have made possible the enunciation by Director Campbell of the striking astronomical generalization that the older stars move more swiftly through space than the younger stars.

rgan, Miss Julia, her services as architect for Women's Senior Hall, built by the Associated Women Students.

pa Seminary Club, \$300, to be administered as a loan fund, under the following regulations: "(1) The Regents to administer this fund as loans to undergraduate students of the junior or senior classes in the departments at Berkeley until such time as by accumulating interest and additional gifts it shall reach the sum of \$2,500, when the donors (members of the Napa Seminary Club) shall appoint whether the amount is to continue a loan fund as to capital and interest, or is to be used as to income only to found a scholarship to be known as the Napa Seminary Scholarship. (2) Preference in loans to be given to descendants of Napa Seminary students and to women students. (3) The Committee of Award to be the Dean of Women or Assistant Dean of Women and the President of the University. (4) Loans not to exceed one hundred dollars to a single student, previous loans from this or other funds counting toward this total. (5) Interest to attach at the rate of six (6) per cent as from the date of graduation or withdrawal from the University. (6) Loans in general to be repayable not later than one year after the date of graduation or withdrawal from the University, though extension of time may be given in the discretion of the Committee of Award."

Nional Academy of Sciences, grant of \$2,100 from the Watson Fund to meet the salaries of two research assistants in the Berkeley Astronomical Department, in the investigation of the perturbations of the Watson Asteroids.

Nive Sons of the Golden West, \$3,000, providing one traveling fellowship yielding \$1,500 and two resident fellowships yielding \$750 each, in California History, for the year 1912-13.



Newman Club, Alumni Council of the, \$100 as a prize to a student or recent graduate of the University of California for the best essay in history or literature, the essay to be called the Newman Hall Prize Essay, and the committee of administration to be appointed by the President of the University from the faculty.

Nuttall, Mrs. Magdalena, some thirty books on lace, embroidery, needle-work, etc.

Oliver, Edwin Letts, '00, a working model of the Oliver Filter.

Paraffine Paint Co. of San Francisco, roofing felt and asphalt cement for use at the Lick Observatory.

Powers, Frank H., four \$100 five per cent bonds of the Bohemian Club completing his gift toward the Lawyers' Memorial Hall Fund.

Prytanean Society, The, \$250 toward the Prytanean Fund for the Infirmary.

Regent of the University, A, \$500, the income of which is to be devoted to the purchase of books in philosophy, history, and belles lettres for the University Library.

Sander, Professor Enno, of St. Louis, and the following citizens of San Francisco: Val Schmidt, Herbert T. Dugan, K. B. Bowerman, A. L. Lengfeld, E. Lauer, Justinian Caire Co., E. L. Baldwin, Dr. H. Law, H. E. Law, Dr. T. Schumate, and R. E. Miller, a tablet in memory of Professor William Martin Searby, late Dean of the Department of Pharmacy.

San Diego Marine Biological Laboratory, gift to: The expenditures to July 8, 1912, for the purposes of the San Diego Marine Biological Laboratory, met by gift funds, have been \$80,865.13. The assets on July 8, 1912, exclusive of the site itself, were \$32,355.35 of which the principal item was the boat the Alexander Agassiz now carried on the books at \$17,100.

San Jose High School, \$250 in provision for the San Jose High School Scholarships.

Sather, Mrs. Jane K.

#### Sather Endowments:

Upon the death of Mrs. Jane K. Sather, on December 12, 1911, President Wheeler, as her Trustee, sold to the Regents for \$400,000 property at the southwest corner of Washington and Fourteenth streets, Oakland, with a frontage of 100 feet on each street and a like depth. The money received from this sale to the Regents was then turned over to the University by President Wheeler, \$34,225



to be applied to the payment of certain minor gifts to relatives and friends, provided for by an indenture executed by Mrs. Sather on November 3, 1900, and the balance, \$365,775, coming to the Regents as a gift from Mrs. Sather. In a letter of February 10, 1910, Mrs. Sather had stated: "I should like these moneys devoted first and primarily to the erection of the Campanile, and second, whatever sum is not required for that purpose, equally to the endowment fund for the Classical Chair and to the endowment fund for the Chair in History."

The Regents on June 11, 1912, voted to devote \$200,000 of Mrs. Sather's gift to the erection of the Sather Campanile, a white granite tower, to be erected where the flagstaff now stands, immediately west of Bacon Hall (formerly known as the Bacon Library). The total gifts from Mrs. Sather to the University on June 30, 1912, were valued as follows in the books of the University:

Jane K. Sather Library Fund .....	\$10,000.00
Jane K. Sather Chair in Classical Literature .....	102,918.79
Jane K. Sather Chair in History .....	102,918.79
Endowment for the Sather Historical Library .....	12,461.68
Jane K. Sather Law Library Fund .....	21,543.35
The Sather Gate (in memory of Peder Sather) .....	43,511.22
The Sather Bells (chimes for the Sather Campanile) .....	25,000.00
The Sather Campanile .....	200,000.00
Sather Fund awaiting distribution (eventually, after the Campanile is completed, the balance in this fund and in the Campanile Fund is to be divided between the endowments for the Sather chairs in History and in Classical Literature) .....	51,485.47
	<hr/>
	\$569,839.30

The following resolutions were adopted by the Regents on February 13:

*"Be It Resolved:* That, in accordance with the recommendation of the Finance Committee, this corporation purchase from Benj. Ide Wheeler for the sum of \$400,000, that certain real property at the southwest corner of Washington and Fourteenth streets, in the City of Oakland, having a frontage of 100 feet on each street and a like depth, and that for the payment of said sum this corporation enter into a written agreement with said Benj. Ide Wheeler as follows:

*"This Agreement,* made this 14th day of February, 1912.

*“By and Between: Benj. Ide Wheeler, the party of the first part and The Regents of the University of California, the party of the second part,*

*“Witnesseth: Whereas, one Jane K. Sather did by indenture date November 3rd, 1900, a copy of which is hereunto attached and marked ‘Exhibit A,’ grant to the party of the first part the real property described in said indenture in trust to sell said real property upon the death of said Jane K. Sather, and to apply the proceeds thereof in accordance with the directions contained and in certain instrument contemporaneous with said indenture and deposited with the Central Bank of Oakland as custodian, a copy of which contemporaneous instrument is hereunto attached and marked ‘Exhibit B’; and*

*“Whereas, the purposes for which the portion of said proceeds which it is specified in said contemporaneous instrument are to be paid to the party of the second part were modified by agreement between said Jane K. Sather and the party of the second part as set forth in the letter of said Jane K. Sather to the party of the first part dated February 10, 1911, and presented to and acted upon by the party of the second part on March 17, 1911, a copy of which letter is hereunto set out and marked ‘Exhibit C’; and*

*“Whereas, the party of the first part has in the performance of said trust sold said real property to the party of the second part for the price of four hundred thousand dollars (\$400,000),*

*“Now Therefore, it is agreed that said price of four hundred thousand dollars (\$400,000) shall be paid by the party of the second part as follows:*

*“1. The party of the second part shall upon demand and as demanded pay to the party of the first part such sums as may be necessary for the discharge by the party of the first part of the charges and of the obligation under said indenture of trust and contemporaneous instrument other than the obligation thereunder to the party of the second part.*

*“2. That in lieu of the party of the second part paying to the party of the first part the balance of said purchase price and the party of the first part then repaying the same to the party of the second part for the purposes set forth in said instrument contemporaneous with said deed of trust and in said letter of February 10, 1911, the party of the second part shall immediately set apart and thereafter hold the balance of said purchase price as a fund to be held by it and applied to and for the said purposes and in accordance with said instrument and letter, and the party of the second part hereby acknowledges the receipt by it from the party of the*

first part of the balance of said purchase price in full discharge of the obligations of the party of the first part to the party of the second part under said trust, the said balance to be held and applied by the party of the second part as aforesaid.

“*In Witness Whereof*, the party of the first part has hereunto signed his name and the party of the second part has, by its officers thereunto duly authorized, hereunto signed its corporate name and affixed its corporate seal the day and year first above written.

“EXHIBIT A

“*This Indenture* made this 3rd day of November, 1900.

“*By and Between*: *Jane K. Sather* of the City of Oakland, State of California, the party of the first part, and *Benjamin Ide Wheeler* of the City of Berkeley, State of California, the party of the second part,

“*Witnesseth*: That the party of the first part does hereby grant unto the party of the second part, in trust as hereinafter specified, the following real property situate in the City of Oakland, County of Alameda, State of California, and particularly described as follows, to wit: [then follows description of Fourteenth and Washington street property.]

\* \* \* \* \*

“*To have and hold*, . . . in trust upon the following trusts, to wit:

I.

“During the lifetime of the party of the first part to receive the rents and profits thereof and pay the same monthly to the party of the first part.

II.

“Upon the death of the party of the first part to sell the same and apply the proceeds thereof in accordance with the directions contained in that certain instrument contemporaneous herewith deposited with the Central Bank of Oakland, as custodian, in a sealed envelope addressed to the party of the second part, which said instrument is here referred to and is hereby made a part of this indenture.

“The party of the second part hereby accepts the trusteeship of said trusts.”

## "EXHIBIT B

"WHEREAS, I, *Jane K. Sather*, of the City of Oakland, State of California, do, by indenture, contemporaneous herewith, grant, as the party of the first part therein, to *Benjamin Ide Wheeler*, of the City of Berkeley, State of California, as the party of the second part therein, certain real property in the City of Oakland, County of Alameda, State of California, forming the southwest corner of Washington and Fourteenth streets, upon the trust, together with another, that said Benjamin Ide Wheeler shall, upon my death, sell said real property and apply the proceeds in accordance with the directions of a certain contemporaneous instrument deposited with the Central Bank of Oakland.

"Now Therefore I do hereby declare this instrument to be the said contemporaneous instrument referred to in said indenture, and I hereby direct that the said Benjamin Ide Wheeler shall apply the proceeds of the sale of said property to the following purposes and in the following order:

"1. To the payment of the proper and legal charges and expenses of the trusts created by said indenture.

\* \* \* \* \*

"Note.—Then follow clauses providing for payment of burial expenses and for gifts to various relatives and friends.

\* \* \* \* \*

"5. The residue of the said proceeds, including any of the gift hereinbefore provided for, the particular specified recipient or recipients of which are not living at the time of my death, shall be paid by the said Benjamin Ide Wheeler to the Regents of the University of California in their corporate capacity, to be by them held as a separate and perpetual fund to be known as the *Jane K. Sather History Fund*, the income whereof shall be by them devoted to the perpetual support, maintenance and equipment of a chair of history at the University of California, to be known as the *Jane K. Sather Chair of History*, and in case the said income is more than sufficient for this purpose, the balance thereof to be devoted by them to the advancement and support of the teaching of history at the University of California in such manner as in their discretion may seem best. The said Regents of the University of California shall have the full and unrestricted rights of control, disposition, and ownership of the money or property constituting said fund, subject only to the purpose of maintaining a perpetual fund properly invested so as to yield an income for the purposes heretofore mentioned.



"*In Witness Whereof* I have hereunto signed my name this 3rd day of November, Nineteen Hundred.

"(Signed) JANE K. SATHER."

"EXHIBIT C

"February 10, 1911.

"MR. BENJAMIN IDE WHEELER,

"*President, University of California, Berkeley, California.*

"DEAR SIR: I am anxious, if possible, to arrange for the erection on the University campus at Berkeley of a campanile to be known as the 'Jane K. Sather Campanile.' I have already placed in trust with Mr. James K. Moffitt the sum of thirteen thousand five hundred dollars to provide for a chime of bells in the campanile. I would suggest the following method of arranging for the erection of the campanile itself:

"I have heretofore given to the University of California funds and securities to the extent of seventy-five thousand dollars as the endowment for a Classical Chair. I have also placed in the hands of my attorney, Mr. Warren Olney, Jr., as trustee, an additional sum of ten thousand dollars to be added to this endowment; I have also conveyed to you as trustee the property on the southwest corner of Washington and Fourteenth streets in Oakland, to be sold at my death and the proceeds to be devoted, first, to the payment to certain individuals of certain sums aggregating about fifty thousand dollars, and second, to the endowment at the University of California of a Chair of History. At the time this deed was made to you it was estimated that the property was worth in the neighborhood of one hundred and fifty thousand dollars. This would have left as the endowment for the chair about one hundred thousand dollars. The property has at least doubled in value and is now worth three hundred thousand dollars or over. This would leave as endowment for the Chair of History, some two hundred and fifty thousand dollars. This is more than would seem to be necessary for that purpose. Mr. Olney advises me that I cannot change the gifts to individuals which are made by the deed of trust, but that, with the consent of the Regents of the University, I can change both the purpose to which the balance of the proceeds of the Washington street property is to be applied and the purpose to which the other funds mentioned above are to be applied.

"I accordingly propose to the Regents of the University through you, that with their consent, there be lumped as it were in one fund, first, the endowment which I have given for the Classical Chair; second, the sum of ten thousand dollars which Mr. Olney



holds in trust as a supplement to this fund; and third, the balance which will come to the University out of the Washington street property which you hold in trust. These should aggregate about three hundred and thirty-five thousand dollars.

"The lump sum so created I should like devoted, first, and primarily, to the erection of the campanile; and second, whatever is not required for that purpose equally to an endowment fund for the Classical Chair and to an endowment fund for the Chair in History. According to advices received from you, the campanile will cost something over one hundred thousand dollars. You have also advised me that \$100,000 is a sufficient endowment for a chair. The lump sum mentioned would provide in all probability at least \$135,000 for the campanile and \$100,000 for each of the chairs. If by any chance, however, it should not prove sufficient to provide for the campanile and also a fund of \$100,000 for each chair, I desire that the Board of Regents make up the deficiency from such other moneys as I have given or may give the University in such manner and to such extent as their discretion may dictate excepting, however, such moneys as are to be devoted to the further construction or adornment of the Sather Gate.

"Unless you see some objection to this plan, I wish you would take it up with the Board of Regents and have their formal consent obtained so that I may know that the matter has been arranged. I would also add that in case I should by any chance pass away before this has been done, I wish this letter to stand as the expression of what I prefer should be done by the University with the moneys above mentioned, and that I would like this letter acted upon so far as legally can be done.

"Respectfully,

"(Signed) JANE K. SATHER."

"*Be It Further Resolved:* That the Secretary be authorized to accept a conveyance of said property by said Benjamin Ide Wheeler to this corporation, and that the President and Secretary be and they are hereby directed and authorized to execute said agreement on behalf of this corporation and in its name and under its seal, and that the proper officers of the corporation be instructed to make to said Benjamin Ide Wheeler the payments of money provided for in Section 1 of said agreement and to set aside and hold the balance of said \$400,000 as a fund to be by this corporation held for and applied to the purposes specified in Section 2 of said agreement and in accordance therewith.

"We recommend also that the President and Secretary of the Board be authorized to execute the papers for the transaction prepared by the attorney of the Board."

The Finance Committee on February 13, 1912, presented the following report as to further gifts from Mrs. Jane K. Sather:

"We have the pleasure of reporting the receipt from Regent Moffitt, as Trustee for Mrs. Jane K. Sather, of the following gifts to the University:

"\$14,502.79, with interest from January 1, 1912, to be used, in accordance with Mrs. Sather's directions, for the purchase and installation of a chime or set of bells on the University grounds at Berkeley, these bells to be known as the Sather Bells, any residue to be added to 'The Sather Library Fund.'

"\$10,000, together with interest since July 17, 1911, to be used for 'The Sather Bells,' or for the Jane K. Sather Campanile.

"We have the pleasure of reporting the receipt from Mr. Warren Olney, Jr., as Trustee for Mrs. Jane K. Sather, of the following gifts to the University:

"\$12,272.35, and interest since January 1, 1912, and also of \$6,547.90, together with interest since January 1, 1912, to be used for the Sather Campanile, or for endowment for the Jane K. Sather Chair in Classical Literature, or for the Jane K. Sather Chair in History.

"\$5,461.68, together with interest from January 3, 1912, and a note and mortgage for \$7,000, duly assigned to the Regents, to be held as a perpetual fund, to be known as "The Sather Historical Library Fund,' the income to be applied for the purchase of books for the Historical Department of the University of California. The total of these gifts just received from the trustees for Mrs. Sather is \$55,784.72.

"The gifts already received from Mrs. Sather by the University appear in the books of the University as follows:

Endowment for the Jane K. Sather Chair in	
Classical Literature .....	\$70,805.00
Jane K. Sather Law Library Fund.....	24,122.35
Sather Library Fund .....	10,000.00
The Sather Gate, built by Mrs. Sather as a mem-	
orial to her husband, Peder Sather.....	43,511.22
	<hr/>
	\$148,438.57
Gifts received in February, 1912, from Messrs.	
Moffitt and Olney, as Mrs. Sather's trustees.....	55,784.72
	<hr/>
	\$204,223.29

"NOTE.—This is exclusive of the property at Fourteenth and Washington streets, Oakland, held by President Wheeler as trustee for Mrs. Sather."

Scripps Institution for Biological Research, The:

On February 13 the Regents accepted from the San Diego Marine Biological Association the entire property of the Scripps Institution for Biological Research. The Institution has been built up through the generosity of Miss Ellen B. Scripps and E. W. Scripps. Some years ago the founders and the City of San Diego provided as a site 170 acres of Pueblo lands at La Jolla, with half a mile of ocean frontage. The founders erected there a fireproof concrete laboratory, containing twelve research rooms for investigators, an aquarium, a library, laboratories, etc. They provided also the two-masted schooner, Alexander Agassiz, a seventy-foot boat with gasoline engines of a capacity of seventy horse-power, and fitted the schooner with the standard equipment of the International Commission for Investigation of the Sea. Further, they provide for the maintenance of the Institution, and have arranged for the building of a pier and other important improvements of the equipment for work.

The following report of the special committee appointed to confer with the representatives of the San Diego Marine Biological Laboratory was adopted by the Regents on February 13, and a vote of thanks extended to the donors.

"Your Special Committee has the honor of reporting that a conference was held at San Diego between representatives of the San Diego Marine Biological Association, representatives of Miss Ellen B. Scripps, and Mr. E. W. Scripps, Professor William E. Ritter (Director of the San Diego Marine Biological Laboratory), President Wheeler, Regent McKinley, and Regent Earl. The result of this conference was full agreement as to the desirability of the transfer to the Regents at this time of the property of the Marine Biological Association of San Diego. We have the honor of recommending that the President of the University and the Chairman of the Finance Committee be authorized to address the following letter to the officers and members of the Marine Biological Association of San Diego:

"BERKELEY, CALIFORNIA, February 13, 1912.

*"To the Officers and Members of the Marine Biological Association of San Diego, San Diego, California:*

"In contemplation of the transfer by your association of the whole of its properties, rights, and privileges to the Regents of the University of California we would say: As we stated to representatives of your association at a meeting held in San Diego a few days ago, the Regents of the University of California and the

officers of the University appreciate fully the importance of the work being done at the Marine Biological Station at San Diego and of the great value, present and prospective, of the properties acquired and held by your association in connection therewith.

“The Regents and the officers of the University recognize also that the development of the station to its present efficiency, and the acquisition by your association of its properties, is largely due to the work of Professor William E. Ritter and his colleagues, aided and encouraged by the financial support of Miss Ellen B. Scripps and Mr. E. W. Scripps. The Regents and the officers of the University are advised, also, that Miss Ellen B. Scripps would be pleased to have her liberal donations to the station, and its development, serve as a memorial to her deceased brother, George H. Scripps.

“In the event a transfer of the property is made by your association to the Regents of the University of California, it will be accepted by the Regents of the University of California in trust for the following purposes:

“1. To become a department of the University, coördinate with its already existing departments; and to have a like status and recognition to that now accorded to the Lick Observatory.

“2. During the lifetime of Miss Ellen B. Scripps and until the final settlement of her estate the management and control of the affairs of the station and properties shall be in the hands of a local board at San Diego, consisting of Miss Ellen B. Scripps, President Benjamin Ide Wheeler, E. W. Scripps, and Wm. E. Ritter, and such other persons as may be mutually agreed upon by them, with authority to name an executive committee of three members; that during such period the sum of one thousand dollars per annum will be paid by the University to Professor William E. Ritter as heretofore.

“3. That during the lifetime of Miss Ellen B. Scripps, and while the affairs of the station are under the control of such local board, and thereafter, the Regents and the officers of the University will use their best efforts to secure the largest possible state appropriations to promote the work of the station.

“4. Whenever funds of the University are available for the purpose the same will be devoted to the work and development of the station.

“5. The official designation of the Station shall be ‘The Scripps Institution for Biological Research, of the University of California.’

“6. The station, and the properties of your association, will be accepted by the Regents of the University of California in trust for the purpose of making it, as a part of the University of Cali-



fornia, an instrument for the most liberal biological research and the free expression and publication of the results of such research, as intended by its founders."

Smith, F. M., \$3,000 for the establishment for a term of two years of a University Fellowship to yield \$125 per month during that time; \$1,000 per annum to be available for the compensation of the holder of the fellowship, and \$500 for the expenses of his research; the object of the fellowship being to provide for investigation into the future needs of urban population on the Oakland-Berkeley-Alameda side of San Francisco Bay with special reference to park and playground possibilities; the desire of the donor being that the results of this investigation should be "at the service of the municipal governments or civic bodies interested," and "that the above sum may be augmented by further subscriptions and assistance of these bodies," and . . . "that the results, so far as they are of sufficient merit, may be published for general information; the direction of this research to be administered by a committee appointed by the President or through the regular machinery for the administration of University fellowships." It was voted, in accordance with the recommendations of President Wheeler and the Committee on Higher Degrees, that the Fellowship be administered by Professors Barrows, Merriam, Derleth, and Jones of that committee, and by Professors Hyde, Howard, and Reed, non-members of the committee.

Spring Valley Water Co., a plaster cast relief map of the region in and about the Bay of San Francisco, for the Department of Geology.

State Fish and Game Commission, The, have promised to continue for the year 1912-13 the fellowship in zoology for the study of the meadowlark, and have founded an additional fellowship to study the conservation of the deer of California; the remuneration for these fellowships is \$110 per month.

Valentine, Mrs. John J., a marble bust of the Venus de Milo, purchased in Rome; also several boxes of minerals, for the Department of Geology.

Women's Christian Temperance Union, a prize of \$50 to the student of the University of California writing the best essay on the subject "The Relation of Individual Total Abstinence to the Prosperity of the Nation."

Wright, Judge H. M., '94, and a group of old friends of Frank Norris, \$250 for a marble chair in the Greek Theatre, to the memory of Frank Norris, '94—novelist and poet.

NOTE.—See also the list of gifts in the statement of income for 1911-12.



## DEPARTMENTAL LIST

## AGRICULTURE

## AGRICULTURAL EDUCATION DIVISION

For the model high school library:

American Book Co.,	31 vols.	Longmans, Green & Co.	1 vol.
Appleton, D. & Co.,	9 vols.	Macmillan & Co.	46 vols.
Badger Publishing Co.,	1 vol.	Orange Judd Co.,	24 vols.
Bardeen, C. W.,	1 vol.	Putnam's Sons, G. P.,	10 vols.
Blakiston's, P., Son. & Co.,	4 vols.	Row, Peterson & Co.,	4 vols.
Doubleday, Page & Co.,	7 vols.	Scribner's Sons, Chas.	3 vols.
Ferguson Publish. Co.	1 vol.	Silver, Burdette & Co.,	2 vols.
Ginn & Co.,	32 vols.	Small, Maynard & Co.,	1 vol.
Heath, D. C., & Co.,	5 vols.	Sturgis & Walton,	8 vols.
Houghton-Mifflin Co.,	2 vols.	Webb Publishing Co.,	11 vols.
		World Book Co.,	4 vols.

In aid of instruction in elementary school methods:

California Seed Co., a set of gardening tools.

Germain Seed Co., \$15 for prizes.

Guano Fertilizer Co., 40 lbs. of commercial fertilizers.

Morse, G. C. & Co., seeds to the value of \$350, and \$25 for prizes.

San Francisco Call, \$25 for prizes.

Miscellaneous:

Baker, Walter, & Son, educational exhibit.

Minneapolis Milling Co., educational exhibit.

## DAIRY INDUSTRY DIVISION

Butter-scoring contest donations as follows:

Contesting buttermakers and creameries, \$136.85; De Laval Dairy Supply Co., \$25; Diamond Crystal Salt Co., \$5; Ford Co., J. B., \$10; Hansen's Chr. Laboratory, \$5; Hilmer Co., F. L., \$10.

Marschall's Dairy Laboratory, rennet extract cheese coloring, and rennet tablets.

San Francisco Salt Refinery Co., 9 barrels of buttercup salt.

Whitney Co., C. E., 25 barrels of Leslie butter salt.

Worcester Salt Co., 2 barrels of Worcester butter salt; 1 barrel of cheese salt.

#### *Loans*

From:

Bunnel, D. H. & Co., No. 5 Simplex Hand Separator.

De Laval Dairy Supply Co., Acme De Laval Turbine Separator No. 15 De Laval Hand Separator, and Disc Continuous Ice Cream Freezer.

Sharples Separator Co., No. 10 Sharples Turbine Separator, and Jersey Hand Separator.

Standard Separator Co., Automatic Separator.

Vermont Machine Co.: No. 15 United States Hand Separator, and No. 6 United States Hand Separator.

#### IMPERIAL VALLEY EXPERIMENT STATION

Armstrong Co., fruit trees and vines, \$8.35.

California Nursery Co., fruit trees and vines, \$25.

Lands, gifts of, as a site for the station, see page 00.

Laughlin, Lester, vines, \$1.

Mills, H. T., trees, \$12.

Pioneer Nursery Co., fruit trees and vines, \$7.

#### MISCELLANEOUS (AGRICULTURE)

Deere Plow Co., an Acme Cultivator.

Frost Prevention Co., 300 Bolton orchard heaters.

Globe Grain Separator Co., Globe Grain Grader No. 2, and Globe Grain Grader No. 00.

Meyers, Dr. William S., \$300, being the first half of a total gift of \$600 for the prosecution of field experiments on the availability of various nitrogenous fertilizers.

Standard Oil Co., 3 Rayo orchard heaters.

#### UNIVERSITY FARM SCHOOL

American Steel & Wire Co., woven wire fence display rack.

Bank, E. Carl, Fenn adjustable post-hole auger.

Benicia Iron Works, orchard cultivator.

## ANTHROPOLOGY

1911-12

arst, Mrs. Phoebe A., gave moneys for the maintenance of the anthropological museum, the formation of which is due to her generosity. Among other gifts were:

arst, Mrs. Phoebe A., Pleasanton, 3 drums.

ge, G. H., San Rafael, box of ethnological specimens.

ter, Jesse, Santa Rosa, 6 mortars and pestles.

ith, F. M., Oakland, 2 prehistoric skeletons.

ask, Mrs. Blanche, Avalon, dog skull, beads, and stone implements.

er, Miss J. E., Reno, Nevada, hammerstone.

yman, W. W., St. Helena, 177 obsidian implements.

oks and pamphlets from A. Rutot, Professor F. W. Putnam, Miss J. E. Wier, Professor O. M. Washburn, Professor Clifton Price, J. B. Ambrosett, Clarence B. Moore, P. Rivet, Feliz Outes, F. W. Hodge, A. Stiegelmann, and W. E. Roth.

1911-12

old, Julean, American Consul at Amoy, China, the costume of a chief of one of the Laekulacku tribes, of the Island of Formosa, together with two monographs by the donor, one of them giving a full description of the articles of clothing and decoration.

Blie, Prof. Joseph, embossed bricks from the Examination Halls in Nanking, China.

Ber, C. L., human bones from the Catalina Islands.

Blerl, Dominee, three Philippine specimens.

Br, E. C., human skull from Pipe line, Tulare County.

deLemasseffsky, Com. Paul, sextant and book.

denleaf, General Charles R., a valuable Philippine collection, drawn from many tribes and localities and including a large assortment of weapons, notably Igorot war spears, shields, bows, arrows, quivers, and axes or hatchets of the Philippine head-hunters, and a varied assortment of Philippine mortars, pestles, and rain coats, a wooden sun hat, and an old Spanish coat of mail and head piece, which was evidently left among the natives by some early explorer.

Hearst, Mrs. Phoebe A., needle-work, copper coins, spoon, wrought iron drum, model of an Alaska skin boat, African drum, two oil paintings: Amedée Jouillin, "The Weaver"; A. Raschen, "Indian Family on Mountain Trail"; framed embroidery; an oil painting by Maud Anne Stokes; a framed colorprint of Plains Indians; \$1,760 toward the maintenance of the Museum; a totem pole, valued \$1,000.

Jones, Claude, eleven fragments of basketry, mats, rope, netting.

Mailliard, Joseph, four human skulls and a dog's skull, from Rancho dos Rios.

Salz, Ansley, eighteen archaeological specimens and human bones, from a shellmound in Benicia.

Trask, Mrs. Blanche, five specimens from the Catalina Islands.

Wood, R. E., eleven lumps of obsidian.

#### ART INSTITUTE (SAN FRANCISCO INSTITUTE OF ART)

1910-11

Friends of Joseph Raphael, the Artist, an oil painting entitled "Fete du Bourgmestre Capt. Van den Broek."

Miscellaneous, to the Library, eight volumes.

Searles, Edward F., a collection of Greek and Roman intaglios reproduced in hard stucco, numbering 746 pieces.

Sumner, Colonel Frank W., a portrait in oils by Oscar Kunath.

1911-12

Friend, A, 68 books, pamphlets, and magazines for the library.

Hoopen, Albert C., line engraving by Bernard Picart.

Walten, John I., framed photograph of the Mark Hopkins Institute.

Yates, Frederick, two oil paintings, "Study of a Boy," by H. S. Forsyth and "Study of a Woman," by S. A. Mowbray.

#### BOTANY: FOR THE HERBARIUM, BOTANICAL MUSEUM AND BOTANICAL GARDEN

##### FOR THE HERBARIUM

Abraham, Charles, San Francisco, 2 sheets of Adiantum.

Alexander, Miss Annie M., Oakland. (See under University of California Museum of Vertebrate Zoology.)

- Baker, Professor C. F., Pomona College, Claremont, 55 specimens of algae collected in Southern California by J. E. Guernsey.
- Bearss, J. A., University of California, 1 sheet of *Fremontia californica*.
- Blasdale, Prof. W. C., University of California, four sheets of phaenogams and two of cryptogams, collected in the Santa Cruz Mountains.
- Botaniska Museum, Lund, Sweden, courtesy of Professor Sv. Murbeck and Dr. Otto Nordstedt, J. G. Agardh—relictæ (17 specimens of algae).
- Boyns, F. W., Santa Cruz, one sheet of *Xerophyllum tenax*.
- Brandege, Mr. and Mrs. T. S., University of California, 3,715 sheets, as follows: 174 sheets of Colorado plants, purchased of the collector, Miss Alice Eastwood; 226 sheets of Arizona plants, purchased of the collector, J. C. Blumer; 385 sheets of California duplicates for distribution; about 1200 sheets of miscellaneous California plants; 1,700 sheets of California and Nevada plants, collected in 1911 (no sets); and 30 sheets of *Ribes* and *Lupinus* purchased from A. A. Heller. (See also under Dr. C. A. Purpus).
- Burt-Davy, J., Pretoria, South Africa, 275 specimens of marine algae from the Cape of Good Hope.
- Butler, George D., Yreka, Siskiyou County, 731 sheets of miscellaneous plants; also herbarium of northern California plants, consisting of 6,187 sheets, of which 2,692 are mounted in permanent form.
- Chandler, Miss K. C., San Francisco, one sheet of *Gentiana calycosa* from Deer Park.
- Clemens, Mrs. M. Strong, Fort Douglas, Utah, one sheet of *Gaultheria myrsinites* from Kings River.
- Collins, F. S., Malden, Mass., ten specimens of algae from Bermuda, British Columbia, etc.
- Condit, I. J., San Luis Obispo, 20 sheets of phaenogams.
- Davidson, Dr. A., Los Angeles, 30 Compositæ from Inyo County, submitted for determination; also two sheets of type material of *Arabis* from Bishop Creek.
- Davis, Edward H., Mesa Grande, a specimen from the Colorado Desert and two photographs of *Bursera microphila*, a tree new to California.
- Dickinson, W. E., Eureka, one sheet of *Phalaris arundinacea*.
- Lisen, Dr. Gustav, San Francisco, one sheet *Lyonothamnus*, collected on Santa Catalina Island in 1874.



- Essig, E. O., State Horticultural Commission, Sacramento, 25 specimens of phaenogams.
- Farlow, Prof. W. G., Harvard University, one specimen of marine algae from Bermuda.
- Fawcett, H. S., State Horticultural Commission, Sacramento, one fungus (*Aegerita Webberi*).
- Foster, A. S., Aberdeen, Washington, 30 specimens of marine algae from the coast of Washington.
- Gardner, Dr. N. L., Los Angeles, 1,020 sheets of West Coast algae; two specimens of lichens and four of algae; ten specimens of fungi; 10 specimens of marine algae; and eight bottles of marine algae preserved in formalin solution.
- Geis, Miss Helen D., Los Angeles, ten sheets of *Galium* from the Yosemite Valley.
- Geiselhart, Miss J., '04, Berkeley, 11 sheets of phaenogams.
- Gilkey, Miss H. M., Corvallis, Oregon, 28 sheets of ornamental shrubs.
- Goldsmith, B. C., '04, Alturas, 27 sheets of Modoc County plants; also one sheet of *Salix Barclayi*.
- Gray, R. S., Oakland, 26 specimens of Holzinger's *Musci Acrocary Boreali-americi*; also 20 specimens, being a continuation of set of "American Hepaticae" (nos. 61-80), prepared by Caroline Coventry Haynes.
- Gray Herbarium, of Harvard University, Cambridge, Mass., through the kindness of Dr. B. L. Robinson, five pockets of *Lupinus*.
- Guam Agricultural Experiment Station, through the kindness of J. I. Thompson, 31 sheets of algae.
- Hall, George R., Santa Ana, ten sheets miscellaneous Sierran plants; 35 sheets of a new *Haplopappus*; also one sheet of *Arbutus Menziesii* from the Santa Ana Mountains.
- Hall, Prof. and Mrs. H. M., University of California, 1,664 sheets as follows: 604 sheets of Sierran plants, collected in 1910; 1,011 Yosemite plants collected in 1911; 17 sheets of *Bellardia Trixago*; also 29 sheets of miscellaneous phaenogams.
- Hasse, Dr. H. E., Sawtelle, one specimen *Trichocoronis Wrightii* from Beaumont.
- Haynes, Miss C. C., New York City, American Hepaticae (nos. 81-100.)
- Heller, Prof. A. A., Reno, Nev., three sheets of *Lathyrus*; two sheets of *Cryptanthus*; and seven sheets of *Lupinus*.

- Jenderson, Mrs. H. H., Berkeley, 25 sheets of phaenogams from Mono Lake.
- Jerre, Dr. A. C., Everson, Wash., four sheets of lichens; also six packages of lichens determined by himself.
- Lickman, J. B., Aromas, Monterey County, two sheets of phaenogams.
- Lutchenison, Miss M. L., Lagunitas, one sheet *Lewisia rediviva*.
- Lyde, Prof. Charles Gilman, University of California, five sheets of phaenogams from San Bernardino County.
- Mepson, Prof. W. L., University of California, 75 sheets, as follows: 39 sheets of ferns, collected by Lorenzo Jared; one specimen *Nothofagus Menziesii*; two sheets of *Pinus Coulteri* and *Pinus Sabiniana* collected at Santa Lucia Peak; one sheet of *Quercus rubra*; also a set consisting of 32 sheets of *Quercus* material, collected by H. H. Bartlett, Bethesda, Maryland.
- Mones, S. S., San Francisco, one sheet *Perilla oeymoides*.
- Königl. Botanischer Garten, Dahlem-Steglitz bei Berlin, Germany, through the kindness of Dr. I. Urban, eight specimens of critical species of *Lupinus*.
- MacGregor, R. C., Rio Baco, Philippine Islands, 80 specimens of marine algae.
- MacKie, W. W., '03, Esperanza, Sonora, Mexico, one sheet of *Brassica juncea*.
- MacLean, J., West Lake Park, Los Angeles, one sheet of *Hovenia dulcis*.
- Manning, Mrs. Mary H., Tule Lake, Oregon, 182 sheets of phaenogams; also 20 sheets of *Sorbaria millefolium*.
- Marchbank, George, Madera, one sheet of *Hemizonia*.
- Millmore, William, Taylor P. O., Alaska, package of Alaskan plants.
- Minthorn, Theodore, Los Angeles, four sheets of phaenogams.
- Miyabe, K., Agricultural College, Sapporo, Japan, 14 specimens of marine algae.
- Monks, Miss Sarah P., San Pedro, 477 specimens of marine algae.
- Moore, E. L., '12, San Francisco, one sheet of *Cynara Scolymus*.
- Morse, W. H., Santa Barbara, four sheets of cultivated plants and four sheets of other phaenogams.
- Murphy, Miss Alice A., Jamacha, one sheet of *Tetracoccus dioicus*.
- New York Botanic Gardens, through the kindness of Dr. M. A. Howe, one specimen of marine algae.

- Parish, S. B., San Bernardino, 681 sheets of phaenogams, including ten sets especially prepared for distribution by the University; also one sheet of *Heteromeles arbutifolia*.
- Pendleton, R. L., '14, 30 sheets of *Gilia Abramsii*; one sheet of *Lupinus Pendletonii*; also one sheet of *Escallonia*.
- Pineo, A. J., Edmonton, Alberta, Canada, 98 sheets of Vancouver plants.
- Purpus, Dr. C. A., University of California, 1,365 sheets of Mexican plants, determined by T. S. Brandegee.
- Rattan, Voleny, Berkeley, one sheet of *Phoradendron flavescens* and 202 sheets of rare and critical phaenogams selected from his herbarium.
- Reed, F. M., Riverside, 90 sheets of Sierran plants collected in 1911, also 48 sheets of *Gilia densifolia* for distribution.
- Reed, Miss Minnie, Kamehameha Boys' School, Honolulu, H. I., 2,230 sheets of Hawaiian algae.
- Reed, Miss Rhoda R., '13, 24 sheets of plants collected in the Yosemite Valley in the summer of 1911.
- Reinbold, Major Th., Itzehoe, Germany, three specimens of *Hypnea* from South Africa.
- Robinson, Alymer and Sinclair, Kauai, H. I., 37 specimens of algae from Niihau Islands.
- Rowe, E. D., Santa Barbara, four sheets of shrubby plants.
- Royal Botanic Gardens, Kew, England, kindness of Director D. Prain 37 specimens of *Lupinus*, being fragments selected largely from type materials; 15 specimens of marine algae (*Laurencia*), kindness of Mr. A. D. Cotton.
- Schellenger, E. E., Riverside, 17 sheets of phaenogams and 35 sheets of Colorado Desert plants.
- Schneider, Prof. A., University of California, 125 lichens, mostly from Vancouver, B. C.; also one phaenogam.
- Senger, Prof. J. H., University of California, 138 sheets of Californian phaenogams.
- Sessions, Miss K. O., '81, San Diego, one sheet *Tetracoccus*.
- Setchell, Prof. W. A., University of California, 165 sheets, as follows 62 sheets of *Nicotiana*, and 25 sheets of algae; 76 sheets of phaenogams collected in the southern and eastern states during the summer of 1907; one sheet of *Rubus laciniatus* from Bohemian Grove also one sheet of lichens.

erra Club, San Francisco, through the kindness of Miss K. D. Jones, Berkeley, seven sheets of Sierran plants, especially selected for the University Herbarium.

lvey, Miss Donna, Castella, one sheet of *Cephalanthera*.

mith, Miss E. H., University of California, five specimens of economic fungi.

mith, Dr. R. J., Milpitas, herbarium of 1,630 sheets of phaenogams, many of which are from European collections.

erry, W. A., Bristol, Connecticut, 36 specimens of marine algae from the coast of Connecticut.

acy, J. P., '03, Eureka, a collection of 1,684 sheets of plants from northwestern California, including 753 to be mounted for herbarium use and 931 to be distributed as duplicates to other botanical institutions; all fully determined and with complete data.

son, W. H., Niles, one sheet of *Rubia peregrina*.

University of California Museum of Vertebrate Zoology, Berkeley, through the kindness of Miss Annie M. Alexander, 638 sheets of specimens, as follows: 34 sheets of Vancouver Island plants, 30 of which were collected by Miss Louise Kellogg and four by H. S. Swarth; 40 sheets of Colorado River plants gathered by Director Joseph Grinnell; 171 sheets of Warner Mountain plants, collected by W. P. Taylor and H. C. Bryant; 179 sheets from the Mount Whitney district, collected by Director Joseph Grinnell and H. S. Swarth; and 214 sheets from northwestern California, collected by Misses Annie M. Alexander and Louise Kellogg.

University of Nevada, Reno, Nevada, through the kindness of Prof. D. P. Frandzen, one sheet of *Lupinus*.

Wentien, A. R., San Diego, one sheet *Pentstemon*.

Walker, Miss Harriet A., University of California, 570 sheets, as follows: 405 sheets of phaenogams, including 224 duplicates for distribution, 76 thistles, and 54 grindelias; 165 sheets of phaenogams for exchange and for the Economic Herbarium.

Walter, Frank, San Diego, 24 sheets of *Eucalyptus* and one of *Pinus Parryi*.

Wber, A. H., '80, Berkeley, one phaenogam.

Wlder, Mrs. C. M., Riverside, one puff-ball and one phaenogam.

Wlder, Gerrit P., Honolulu, Hawaii, one sheet of *Nicotiana Tabacum*.

Wlters, William H., Berkeley, four sheets of ornamental plants.



Woodcock, Miss Fidella, Pacific Grove, donated through Miss Norton Pacific Grove Museum, four sheets of plants.

Yendo, Prof. K., Sapporo, Japan, five specimens of marine algae.

(Total number of specimens received by gift from July 1, 1910 to June 30, 1912, for the herbarium, 25,016).

#### FOR THE BOTANICAL MUSEUM

D'Allesandro, Julius, Isleton, nine specimens of nettle and fibres made from nettles.

Ames, Miss Isabel, Gualala, Mendocino County, cottony balls on *Corethrogyne*.

Bienenfeld, Bernard, San Francisco, 17 samples of woods from Borneo each accompanied by the Dutch name and by information concerning the tree from which taken.

Booth, Prof. Edward, University of California, one section of wooden pipe used in London about 250 years ago; also two other wooden specimens.

Clemens, Mrs. Mary Strong, Fort Douglas, Utah, one photograph of *Clemensia*.

Cole, Miss K. E., Berkeley, one specimen *Prunus Andersonii* from Lake Tahoe.

Cunningham, Charles Henry, Baguio, Manila, Philippine Islands, four cones of *Pinus insularis*.

Doyle, M., Berkeley, a collection of 574 specimens of wood, consisting of the following: 160 specimens of Japanese woods, 31 of Honduran woods, 16 from Jerusalem, 72 of South American woods in square 66 from Honduras, Australia, West Indies, Hawaii, and Tasmania; 96 from India and North America, 19 from Mexico, California, and Colorado, and 114 miscellaneous woods.

Dutton, B., Guinda, Yolo County, three roots of *Cicuta formosum*.

Garden, William, Stockton, two specimens of *Araujia sericifera* pods.

Greene, H. A., Monterey, wax weed (*Euphorbia antisiphilitica*) from Sierra Blanco, Texas, and specimens of wax made from it.

Gunnuldsen, Miss, East Oakland, one teratological *Hypochoeris*.

Hall, Prof. H. M., University of California, five specimens of fungi from the Yosemite National Park.

Henderson, J. J., Henderson, one package of Ginseng.



- ilgard, Prof. E. W., University of California, four photographs of flowers of the date palm.
- oward, Mrs. Emma Shafter, San Francisco, two volumes of Meehan's "Native Flowers and Ferns."
- pson, Prof. W. L., University of California, specimens of Torrey pine, including cones and wood sections, collected by H. A. E. Marshall and M. B. Elliott of the United States Forest Service, and transmitted by Swift Berry; a sample of klot-dite made by the Indians from tarweed; powder ground from tarweed achenes, obtained by Dr. P. E. Goddard in Mendocino County in 1902; section of trunk of Field oak; branch of *Prunus emarginata* collected by R. R. Rogers; branch of Maple collected by Benjamin Weed; specimens of Russian Thistle from C. R. McBride; artificial silk manufactured at Padua, Italy; also 13 pieces of Tan oak bark from Sherwood with data as to loss of weight in drying.
- nes, Miss K. D., University of California, three wood specimens of *Acacia*.
- eineke, Dr. E. P., of the United States Forest Service, San Francisco, one photograph.
- illmore, William, Taylor P. O., Alaska, one package of pappus of *Petasites*.
- ddin, Ralph E., '12, North Fork, 23 specimens of tree fungi.
- ed, Miss Minnie, Kamehameha Boys' School, Honolulu, H. I., one specimen of *Freycinetia Arnottii*; also 14 species of algae in formalin from Naples, Italy.
- binson, A. Warren, Santa Cruz, one teratological rose.
- we, Miss M. Grace, '10, Alameda, one cone of *Araucaria bidwillii*.
- hneider, Prof. A., University of California, three boxes of Rock Lichens collected at Vancouver, B. C.
- urgeon, J. F., Soldiers' Home, one prepared specimen of burl of broad-leaf Maple, mounted on a pedestal of four kinds of California woods; also one piece of inlaid work representing seven kinds of California woods.
- il, Miss M. B., Berkeley, three cones of Sugar pine from Plumas County.
- Vndercook, E. P., East Oakland, two cones of Sugar pine from Nelson Point, Plumas County, through the kindness of Miss M. B. Vail.
- lker, Miss H. A., University of California, acorns of *Quercus Kelloggii*.

Young, W., Manila, P. I., three cones of *Pinus insularis*.

(Total number of plants received by gift from July 1, 1910, to June 30, 1912, for the Botanical Museum, 710).

FOR THE BOTANICAL GARDEN

Brandege, Mr. and Mrs. T. S., University of California, 58 packets of California seed; also one packet of Mexican seed.

Brandt, R. P., '12, Gualala, five Hemlock trees from the Mendocino Coast; four specimens of *Sisyrinchium californicum*; also two rooted stocks of *Arctostaphylos Uva-ursi*.

Chandler, H. P., '02, St. Louis, Missouri, one packet of seed of *Allium stellatum*; also two packets of seed from the Santa Cruz Mountains.

East, Prof. E. M., Harvard University, one packet of *Nicotiana angustifolia crispa*, original seed from A. Splendore, Scalfati, Italy; also four other packets of tobacco seed from Italy.

Eschancier, Louis, Rascon, S. L. P., Mexico, seeds of *Hedysarum coronarium*, with natural soil for propagation.

Forbes, C. N., '08, Bishop Museum, Honolulu, H. I., seeds of *Argyroxiphium* from Maui.

Gray, John T., Ruth, one packet of grass seed for trial, through J. I. Coffman and Prof. Wickson.

Greene, H. A., Monterey, one packet of seed of a rare *Sophora*; also one potted Hemlock tree.

Hall, Prof. H. M., University of California, two packets of seed from Trinity County; also eight packets of seed of Sierra Nevada plants.

Hassler, Earle, Placerville, one packet of seed of *Cornus sessilis*.

Hatfield, Prof. H. R., University of California, 15 cuttings of *Schizophragma*, an ornamental vine; also three packets of seed of native California plants.

Herman, W. A., Briceland, one packet of seed of *Sanguisorba minor*, valuable forage plant.

Hickman, J. B., Aromas, Monterey County, two packets of *Forestiera* seed from Salinas Valley; also one packet of seed of *Arctium lappa*.

Hoak, Miss Charlotte, '00, Los Angeles, two packets of seed from Southern California.

Horne, Prof. William T., University of California, four packets of seed of tropical plants.

son, Prof. W. L., University of California, one packet of seed of *Lupinus nanus* from Sonoma Valley; one packet of *Quercus Ilex*, one of *Q. Hodginsii*, and one of *Nothofagus Menziesii*, collected in New Zealand by T. W. Adams; also seed of *Lewisia* from the summit of El Capitan.

nes, Miss K. D., University of California, seeds of *Arnica* from Kings River Cañon.

ellwaine, Miss Helen, Dorleska, one packet of *Lathyrus* seed.

ekie, W. W., '03, Esperanza, Mexico, one packet of seed from Turkestan.

ller, F. A., Fruitvale, five packets of seed of shrubs and trees, especially desired for the Botanic Garden; also one packet of seed of *Juniperus occidentalis* from San Bernardino Mountains.

ewcombe, Dr. C. F., Victoria, B. C., seeds of wild tobacco used by the Thompson Indians of British Columbia, collected by J. A. Teit.

eterson, W. D., Newark, seeds of the California wild plum.

erne, Theodore, Los Angeles, two live plants of *Acacia podalyriaefolia*.

Erine, W. G., University of California, seven packets of flower seed.

Eddy, Carl, Ukiah, one living specimen of *Lewisia Howelii* from southern Oregon.

Epus, Dr. C. A., University of California, seven packets of seed of Mexican plants.

Eclogle, D. P., Berkeley, sack of bulbs of *Dracunculus* from Hawaii, grown in Berkeley.

Royal Botanic Garden, Edinburgh, Scotland, packet of tobacco seed.

Sellenger, E. E., Neighbors, one packet of tobacco seed collected at Shavers Well.

Schell, Prof. W. A., University of California, one packet of seed of *Lavatera*; one packet of *Echinocystis*; one packet of *Sisyrinchium bellum*, representing the broad-leaved form; 14 packets of vegetable seeds; seeds of Chinese Mustard; also seeds of wild tobacco used by the Thompson Indians and collected at Spence's Bridge, B. C., by J. A. Teit.

Seckels, Rudolph, San Francisco, nine live plants and 50 packets of seed.

Tey, Joseph P., '03, Eureka, two packets of *Lupinus* seed.

Trask, Mrs. Blanche, Avalon, three packets of seed from the Southern California Islands.

Ullner, Frank, San Francisco, seed of *Echinocystis*.

United States Department of Agriculture, Washington, D. C., kindness of P. H. Dorsett, three live plants of *Agave Wercklei* from Costa Rica; tobacco seed from Bagdad, Turkey, and from Chili.

United States Forest Service, San Francisco, one packet of seed of bl gum, and one packet of seed of "San José gum," for experimental purposes.

Valentien, A. R., San Diego, seeds of *Nicotiana* from San Diego County.

Walker, Miss Harriet A., University of California, two packets of *Echinocystis* seed.

Weldon, W. P., Oilfields, seeds of legume used for green manuring.

Wolters, William H., Berkeley, seven living plants.

(Total number of specimens received by gift from July 1, 1911 to June 30, 1912, for the Botanical Garden, 259. Grand total of donations to the department between these dates, 25,985.)

## CIVIL ENGINEERING

1910-11

American Bridge Co., blue prints of various of their constructions.

Blake & Bilger Co., rock for thesis investigations.

Bley, C. N., two copies City Building Ordinance, Seattle, 1910.

Canadian Pacific Railway Co., oillette of "Empress of Ireland."

Carnegie Steel Co., two sets of publications, handbooks, etc.

City Engineer's Office, Los Angeles (per H. S. Crocker), blue prints of Main-street bridge.

Corrugated Bar Co., through Mr. J. B. Leonard, corrugated steel bars.

Cowell Cement Co., complete set of samples of cement products in glass bottles and blue print plan of their plant.

Davenport Cement Co., 100 sacks of cement.

Derleth, Prof. Charles, Jr., 14 volumes, Proceedings of the American Society of Civil Engineers, and 53 other volumes for the Civil Engineering department library.

- ietzgen Co., Eugen, three framed pictures of their factory and instruments.
- yer Brothers, contractors for structural steel, two riveted joints showing effect of hot riveting.
- ttler, J. A., two slide rules.
- ladding, McBean & Co., two barrels of fireproof tile and samples of pipes and fittings.
- gde, Prof. Charles Gilman, records and drawings for water works and sanitary construction.
- ofmann, J. A., blue prints of reinforced concrete building.
- ahn, Henry, & Co., a clinometer compass in a special mahogany case.
- rfkin Steel Tape Co., tape.
- illiken Brothers, blue prints of various constructions and of various structures erected by the firm.
- ississippi Wire Glass Co., samples of wire glass.
- ek, Prof. H. W., China, two photographs of Pei Yang University, China.
- ennsylvania Steel Co. (per Crosby Miller), blue prints of Blackwell's Island bridge, New York City.
- nsome Construction Co. (per G. J. Calder), blue print drawings of market building, Polk Street Investment Company, and of Sacramento Hotel.
- bson, R. E., firm of Sloan & Robson, blue prints of irrigation plant, Madeline, California.
- ring Valley Water Co., large framed picture.
- bbets, F. H., blue prints of Piedmont and Ripon reinforced concrete arch bridges.
- iversal Portland Cement Co., fifty copies of standard specifications.
- illard, W. C., two sets of taper curve tables and two sets of surveying notes from Washington State College, Pullman, Washington.
- ods & Huddart Co., San Francisco, four bars of twisted steel.

1911-12

- merican Bridge Co., shop drawings for steel frames, San Francisco buildings.
- bbbs, A. L., plans Pantages Theatre, Oakland.



Clinton Fireproofing Co., thirty-six photographs of Pacific Coast building  
Corona, F. F., three engineering books published by the Minister of  
Public Works, Chile.

Cory, H. T., 69 lantern slides, illustrating the Imperial Valley and Salton  
Sea reclamation work.

Holmes, Howard C., plans and specifications, Esquimaux Drydock, Victoria,  
B. C.

Lang, R. K., '09, and Hall, Ward, ex-'07, picture of U. S. Naval Coal  
Station, California City, Tiburon.

Lufkin Rule Co., 100-foot reliable tape and no. 3100 babbitt metal chain  
tape.

McCoy, J. M., plans 60-ft. deck plate girder span, N. W. P. R. R.

Moore, Mrs. C. E., 105 volumes, Proceedings and Transactions of the  
American Society of Civil Engineers, for the Civil Engineering department  
library.

Pennsylvania Railroad Passenger Department, picture of Pennsylvania  
Station, New York City.

Rhodes, E. H., C.E., plans of the Grafton reinforced concrete bridge, New  
Zealand.

Roebeling Construction Co., forty copies "San Francisco Earthquake and  
Fire of April, 1906."

Santa Cruz Portland Cement Co., twenty-five barrels of cement for testing  
laboratory use.

Santa Fé Co., two samples of railroad ties.

Soulé, Prof. Frank, 251 volumes for the Civil Engineering department  
library.

Spencer-Otis Co., ten samples of railroad tie plates.

Trussed Concrete Steel Co., two books and portfolios of blue prints.

United States Steel Products Co., plans Interstate Transfer Railroad Company  
bridge, St. Louis.

Woods, R. V., City Architect's Office, San Francisco, plans of the Girard  
High School building.

## CHEMISTRY

samples of their respective products for exhibition purposes and for special investigation work have been presented to the department of chemistry by the following named firms:

Baker, J. T., Chemical Co.  
 Badische Anilin & Soda Fabrik.  
 New Jersey Zinc Co.  
 Standard Oil Co.  
 Union Oil Co.

## INFIRMARY

aneroft, Mrs. Frank Watts, six weathered oak chairs.  
 ettison, Miss Ethel, six books.  
 avis, James R., twenty-one books.  
 arst, H., \$100.  
 erend, M. L., two books.  
 pward, Mrs. S., \$25.  
 rasey, H. S., one picture, "Lady Fitz Herbert" (by George Romney).  
 heeler, President Benj. I., four books.

## MEDICAL DEPARTMENT IN LOS ANGELES

donations of money totalling \$1437:

Anton, Dr. F. S.	Ferbert, Dr. J. C.	Mattison, Dr. F. C. E.
Bancroft, Dr. F. S.	Fowler Bros.	Millspaugh, Dr. W. P.
Bancroft, Dr. I. R.	Fulton, Dr. Dudley	Moore, Dr. M. L.
Barlow, Dr. W. Jarvis	Hagadorn, Dr. M. E.	Morton, Dr. L. B.
Beckett, Dr. W. W.	Hastings, Dr. Hill	Orbison, Dr. T. J.
Black, Dr. Stanley P.	Haynes, Dr. J. R.	Pahl, Dr. P. C. H.
Brainard, Dr. H. G.	Howard, Dr. H. W.	Pottenger, Dr. F. M.
Breed, Dr. L. M.	Jackson, Dr. Josephine	Pottenger, Dr. J. E.
Bridge, Dr. Norman	Johnson, Dr. P. V. K.	Richardson, Dr. W. W.
Browning, Dr. C. C.	Johnson, Dr. Milbank	Roberts, Dr. W. H.
Bullard, Dr. R. T.	King, Dr. Charles L.	Rogers, Dr. A. C.
Chancellor, Dr. P.	King, Dr. J. M.	Sherk, Dr. H. H.
Cochran, Dr. Guy	Lasher, Dr. George	Tasker, Dr. Dane
Coffey, Dr. T. J.	Lindley, Dr. Walter	Taylor, Dr. R. G.
Cole, Dr. George L.	Lockwood, Dr. Chas. D.	Thomas, Dr. C. P.
Colloran, Dr. J. E.	McArthur, Dr. W. T.	Warden, Dr. C. C.
Downs, Dr. A. J.	McBride, Dr. J. H.	White, Dr. P. G.
Duffield, Dr. William	MacGowan, Dr. Granville	Wilde, Dr. Kate
Edwards, Dr. W. A.	MacLiesh, Dr. A. L.	Wills, Dr. W. L., and
Ellis, Dr. H. B.	McNeil, Dr. H. G.	Wing, Dr. Elbert
Eversole, Dr. H. O.	McQuiston, Dr. Caroline	

## Donations of books:

Barlow, Dr. W. J.	Fulton, Dr. Dudley	Lobingier, Dr. A. Stewart
Beckett, Dr. W. W.	Folsom, Mrs. Martha	MacGowan, Dr. Granville
Black, Dr. S. P.	Hastings, Dr. Hill	Moore, Dr. Ross
Brainard, Dr. H. G.	Haynes, Dr. J. R.	O'Reilley, Dr. T. W.
Bridge, Dr. Norman	Hinsdale, Dr. Guy	Rogers, Dr. A. C.
Bullard, Dr. R. T.	Johnson, Dr. Milbank	Shank, C. E.
Cabot, Dr. Hugh	Keyes, Dr. E. S.	Speer, Dr. Grant
Dudley, Dr. W. H.	Kelley, Dr. E. S.	Taylor, Dr. Howard G.
Dorsey, Dr. Rebecca	King, Dr. Charles L.	Walsh, Joseph
Dunsmore, Dr. Nannie	Kress, Dr. George H.	Wing, Dr. Elbert
Eaton, Mrs. Wm. B.	Lane Medical Library	Williams, Dr. Ralph, and
Ellis, Dr. A. D.	Lindley, Dr. Walter	Wollaber, A. B.
Ellis, Dr. H. B.	Lissner, Dr. Henry	

## MINING AND METALLURGY

Baldwin Acetylene Lamp Co.: three Baldwin acetylene lamps, for miner use, with extra containers.

Bradley, F. W.: one photograph of the Alaska Treadwell Mines, Douglas Island, Alaska, 19" x 68"; one photograph of the Bunker Hill and Sullivan mines, Kellogg, Idaho, 16" x 65".

du Pont de Nemours, E. I., Powder Co., San Francisco, Cal.: seven thousand empty dynamite cartridges and twelve empty dynamite boxes (received in 1910), seven empty black powder cans, 1000 feet Eclipse brand blasting fuse (through Coast Mfg. and Supply Co.), one box of 100 empty blasting caps and two crimpers for attaching caps to fuse (through California Cap Co.), one galvanized thawing kettle, one electric blasting machine, 100 electric blasting squibs, one test lamp, one pocket galvanometer for testing wiring, one rheostat for testing battery, two crimpers, wire, etc.

Hearst, Mrs. Phoebe A., for further equipment of the Hearst Memorial Mining Building, \$2,942.

Hendy, Joshua, Iron Works: one "Hutchinson" ore feeder.

Leyner, J. Geo., Engineering Works Co.: one No. 8 water Leyner drill, one 6' 6" double screw column, one tripod complete with weights, two ¾-inch air hose couplings, two ½-inch water hose couplings, two air hose couplings, one air line connection, one water tank, one No. 1 type A Leyner stope drill, one piece 24" x 1" cruciform drill steel.

Muirhead Machine Works, Pittston, Pa., 2000 spades for mine surveying.

Pictures for framing:

Davenport Locomotive Works, Davenport, Iowa.

Goodman Manufacturing Co., Chicago, Ill.

Minneapolis Steel and Machinery Co., Minneapolis, Minn.

rade publications for distribution to classes in mining:

- American Steel and Wire Co., San Francisco.
- Austen Manufacturing Co., Chicago, Illinois.
- Bagley Grader Co., Tacoma, Washington.
- Browning Manufacturing Co., San Francisco.
- Bausch and Lomb Optical Co., Rochester, New York.
- California Cap Co., Oakland California.
- Davenport Locomotive Works, Davenport, Iowa.
- duPont de Nemours, E. I., Powder Co., San Francisco.
- Fresno Agricultural Works, Fresno, California.
- Harron, Rickard & McCone, San Francisco (copies of the publications of Ingersoll-Rand Co., New York, and Sterling Wheelbarrow Co., West Allis, Wisconsin).
- Leyner, J. George, Engineering Works Co., Littleton, Colorado.
- Rix Compressed Air and Drill Co., San Francisco (copies of the publications of Laidlaw-Dunn-Gordon Co., Cincinnati, Ohio).
- Studebaker Bros. Mfg. Co., San Francisco.
- Sydney Steel Scraper Co., Sydney, Ohio.
- Syracuse Chilled Plow Co., Syracuse, New York.
- Vulcan Steam Shovel Co., Toledo, Ohio.
- Western Wheeled Scraper Co., Aurora, Illinois.

#### PALAEONTOLOGY

- Alexander, Miss Annie M., funds for the support of research.
- Beck, T. H., specimens from the Miocene of middle Nevada.
- Bark, Dr. F. C., typical specimens needed for the study of the fauna of Rancho La Brea, recent mammalian material for use in comparative study, a collection of fossil marine shells, and a collection of vertebrate remains from the Pleistocene of San Pedro.
- Brand, A., vertebrate remains from the Orindan formation, near Mount Diablo.
- Brewer, Dr. J. C., vertebrate specimens from Hawver Cave, near Auburn.
- Miller, Dr. L. H., several type specimens of birds and mammals from the Rancho La Brea beds of Los Angeles; also a collection of vertebrate remains from the Pleistocene of San Pedro.

- Morrice, Charles, a collection of fossil remains representing the marine vertebrates of Miocene beds in the Kern River oil fields.
- Moruning, H. S., and Suman, John R., a collection of vertebrate remains from the Mohave Desert.
- Ross, Madam Ida Hancock, permission to collect, for a period of six months from September 1, 1912, vertebrate remains in the famous Rancho La Brea fossil beds of Los Angeles.
- Stoner, R. C., a collection of vertebrate and invertebrate specimens from Miocene beds of the Tejon Hills, California.
- Studley, C. K., a collection representing the Tertiary fauna of the Chico formation at Chico and adjacent localities.

#### SLAVIC LANGUAGES

- Polish National Alliance of the United States, 1 volume, *Pamiętnik wzniesienia i odsłonięcia pomników Tadeusza Kościuszki i Kazimierza Pułaskiego*, Chicago, 1911. (Memorial of the erection and unveiling of the monuments [in Washington] of Thadeus Koscieszko and Casimir Pulaski.)

#### ZOOLOGY DEPARTMENT

1910-11

- Baker, C. L., collection of Crustacea from Wyoming.
- Baker, Dr. G. S., *Oestrus ovis* from Hawaii, *Trichinella spiralis*, *Echinococcus polymorphus*, *Fasciola hepatica*, from slaughter houses San Francisco.
- Briggs, R. S., '13, 4 anatomical preparations.
- Bryant, H. C., '10, 5 reptiles, 1 fish.
- Bryant, H. C., and Taylor, W. P., collection of parasites, blood smears and embryos from Warner Mountain Expedition, 276 entries, by the courtesy of the Vertebrate Museum.
- Butler, F. M., collection of corals and shells from Fanning Island.
- Hatch, John, 1 leopard's skull from Rhodesia.
- Kreutzmann, H. A. R., '14, anatomical preparation.
- Long, Dr. J. A., collections of invertebrates from Moss Beach, California.
- Mansell, R. E., 4 snakes from the University grounds.
- Michener, Mrs. E. J. Rigden, '05, collection of prepared *Hydra* for class use.



- Amzmain, M. D., '07, 7 preparations of Surra disease of horses.
- Atkin, E. P., '09, 20 Sceloporus.
- Evoy, Dr. Wilbur A., brain of rabid dog.
- Barth, H. S., collection of 35 blood smears from birds and mammals of Vancouver, by courtesy of the Vancouver Expedition of the Vertebrate Museum.
- Flower, W. P., '11, and Bryant, H. C., '10, collection of parasites, blood smears, and embryos from the Warner Mountain Expedition, 276 entries, by courtesy of the Vertebrate Museum.
- Warren, Rev. J. B., collection of 39 mounted birds and three mounted mammals.

## 1911-12

- Bley, S. E., '09, collection of Amphibians from Sutro Forest, and collection of human parasites from the University Medical Hospital.
- Bard, Prof. J. F., '03, 3 amphibians from Oregon.
- California & Hawaiian Sugar Refining Co., by Geo. M. Rolph, collection of 30 species of Hawaiian fishes.
- California State Fish and Game Commission, specimens of blackhead disease (*Eimeria avium*) of turkey, specimens of quail disease, bird stomachs for investigation, as follows: meadow lark, 1876; blackbird, 1812; robin, 558; horned lark, 353; doves, 114; roadrunner, 31; jay, 7; woodpecker, 19; towhee, 4; miscellaneous, 57; collection of parasites of deer.
- Chapman, Dr., nematodes from trout.
- Clark, H. A., '12, collection of stomach parasites of mountain sheep and deer from Inyo County.
- Fluke, F. C., '11, collection of stomach parasites of deer.
- Lowell, B. C., preparation of pathogenic intestinal amoebae.
- McNeena, Dr. A. A., tooth of alligator from Australia.
- Peckherstone, E. J., abnormal hen's egg.
- Parker Fund, by Mrs. Margaret B. Fowler and Miss Fowler, collections of parasites and embryological material from Colorado River Expedition, collections of plankton from the same, collections of parasites and embryological material from the San Joaquin Valley Expedition; 182 numbers.
- Pinell, Joseph, 1 owl infected with *Filaria*, 1 pelican, and collection of ticks from Cormorant.

Hall, I. C., '11, nematodes from Belgian hare.

Haring, Prof. C. M., pure strain of virus of Epithelioma contagiosum.

Holden, F. H., '13, nematodes from skunk.

Kofoed, Prof. C. A., 3 specimens Physalia, Exocoetes palinurus, collection of land crabs from Galapagos Islands, 250 collections of freshwater plankton.

Maillard, Joseph, by L. D. Prince, '10, collection of parasites of cattle.

Prince, L. D., '10, 25 slides of malarial blood, 1 Dibothriocephalus lat, 3 slides Spirochaeta pallida, 50 slides Strongylus micrurus.

Sharp, R. G., '11, collections of stomach parasites of sheep and cattle.

Snook, H. J., '12, 7 nematodes from Amphibians.

Spring Valley Water Co., by Mr. C. A. Elliott, manager, series of plankton collections from Lake Honda and Lake San Andreas, 130 jars.

Storer, T. I., collection of amphibians and reptiles from Alameda County, 9 vials parasites, 20 blood smears from Mount Whitney Expedition, by courtesy of the Vertebrate Museum.

Turkington, Mr., Blunt's Reef Light Ship, collection of invertebrates and fishes, 16 jars.

## ZOOLOGY (CALIFORNIA MUSEUM OF VERTEBRATE ZOOLOGY)

1910-11

NOTE.—This list does not include specimens obtained by collectors regularly employed from the fund provided by Miss Alexander for the maintenance of the Museum.

The term "mammal" as here used usually means a dry study skin plus the skeleton belonging to the same individual; occasionally a complete skeleton, or the entire animal preserved in alcohol. A "bird" is usually a dry study skin; sometimes a skeleton. A "set of eggs" is the total number of eggs found in a bird's nest, sometimes accompanied by the nest. A "reptile" is the entire animal preserved in alcohol.

The Museum contained on June 30, 1911, as the property of the University, the following catalogued specimens: mammals, 12,997; birds, 19,109; reptiles, 2,492; and of birds' eggs, 1,083.

Alexander, Miss Annie M.: 1272 mammals, 1374 birds, 443 reptiles, and 2 sets of birds' eggs (from the Colorado River Expedition); 497 mammals, 1448 birds, and 14 sets of birds' eggs (from the Warner Mountain Expedition); 502 mammals, 331 birds, and 54 reptiles (from the Humboldt Bay Expedition); 3 birds' skulls (from Alaska); 5 birds (from Siberia and Alaska); 554 mammals, 1142 birds, 3 sets of eggs, 23 reptiles, 2 batrachians (from the 1910 Expedition to Vancouver Island); 3 mammals (beavers, from the San Joaquin Valley); 3 mammals (coyotes, from the San Joaquin Valley); 1655 birds (12 skins and 83 skeletons, water birds from Monterey Bay).

- xander, Miss Annie M., and Kellogg, Miss Louise: 34 mammals and 61 birds (from the San Francisco Bay region); 181 mammals and 113 birds (from the Trinity Mountains); 37 mammals and 18 birds (from Tehama County); 21 mammals (from Colusa County); 169 mammals and 149 birds (from the Sierra Nevada); 4 mammals and 14 birds (from Marin County).
- xerrell, Mrs. H. E., 1 reptile (lizard, from Oakland).
- ley, Harold H., 6 sets of birds' eggs (from Virginia).
- umberger, J. P., 1 bird (hawk, from Nevada).
- ackman, L. E., 1 reptile (lizard, from Berkeley).
- yles, C. W., 2 birds (from Oregon).
- adley, Miss D., 1 bird (curlew, from San Francisco Bay).
- oks, Allan, 9 mammals and 11 birds (from British Columbia).
- ant, H. C.: 1 mammal (harvest mouse, from Siskiyou County); 2 mammals (white-footed mice, from Berkeley); 52 reptiles and 43 batrachians (from the San Francisco Bay region); 4 reptiles (snakes, lizard and horned toad, from Berkeley); 3 reptiles (from Los Angeles County); 3 reptiles and 3 batrachians (from southern California); 3 birds and 4 mammals (from the Colorado Desert).
- ap, Charles: 3 mammals (from Los Angeles County); 5 mammals (from southern California); 4 mammals (1 skull of Catalina Island fox, and 3 bats).
- ry, C. L., 3 birds (from Humboldt County).
- le, H. K., 2 birds (from Illinois).
- huell, T. L., 2 mammals (muskrats, from Connecticut).
- ois, Howard, 1 set of birds' eggs (black tern, from Nevada).
- pe, Lee R., 8 birds (from Washington).
- Don, Joseph: 2 mammal skulls (from San Diego County; 4 birds (woodpeckers, from Alaska); 2 mammals (from San Diego County).
- isher, E. J., 2 mammal skins and 1 bird skeleton (from Los Angeles County).
- alt, B. T., 1 bird (woodcock, from Arkansas).
- en, C. de Blois, 3 mammal skulls (bear, from the Queen Charlotte Islands).
- innell, J., 1 batrachian (from Pasadena).

- Grinnell, J. and H. W., 12 mammals, 6 reptiles, and 1 set of birds' eggs (from Yosemite Valley).
- Hasselborg, A. E., 10 mammals (from southeastern Alaska).
- Hawver, J. C., 1 mammal (mountain lion, from El Dorado County).
- Holliger, C. D., 1 reptile (lizard, from Berkeley).
- Hutchinson, L., 1 reptile (snake, from Berkeley).
- LaPlace, Mrs. J., 1 reptile (snake, from San Francisco).
- Littlejohn, Chase, 13 birds (black rails and Virginia rails, from San Francisco Bay).
- Mailliard, Joseph, 2 birds (type and co-type of the Modesto song sparrow) 1 mammal (*Neurotrichus*, from Marin County).
- Noble, W. H., 1 bird (Bohemian waxwing, from Sacramento).
- Pemberton, J. R., 5 birds (from Monterey County).
- Ray, M. S., 1 bird (Canada goose, from Lake Tahoe).
- Shufeldt, Dr. R. W., 1 mammal (raccoon, from Virginia).
- Smith, F. C., 1 bird (from Humboldt County).
- Taylor, Walter P., 1 mammal skull (of domestic hog), 2 reptiles (from Contra Costa County).
- Thayer, John E., 2 sets of birds' eggs (from Lower California), 24 birds (from Lower California).
- Ward, Harold, 1 bird (pigmy owl).
- Wear, Miss Winifred N., 1 mammal (bat, from Fresno).
- Wells, Clarence E., 1 mammal (fruit-eating bat).
- Wheeler, R. S., 1 bird (European goldfinch).
- Wilder, H. E., 4 mammal skulls and 1 bird skeleton (from Riverside County).
- Willard, F. C., 1 bird (Texas kingfisher, from Arizona).
- Willett, G., 2 mammals (foxes, from San Miguel Island).
- Wright, Howard, 4 birds (quail, from Santa Catalina Island).

1911-12

NOTE.—Each entry indicates either a mammal, a bird, a reptile (or batrachian), or a set of birds' eggs. The term "mammal" means usually a dry study skin plus the skull belonging to the same individual, not infrequently a complete skeleton, and sometimes the entire animal preserved in alcohol. A "bird" is usually a dry study skin, sometimes a complete or partial skeleton. A "set" of eggs is the total number of eggs found in a bird's nest, often accompanied by the nest itself. A "reptile" is the entire animal preserved in alcohol.

Alexander, Miss Annie M.: During the year Miss Annie M. Alexander has contributed to the support of the Museum, and for particular purposes, such as the expenses of special field trips, a total of \$10,512.04. This does not include the cost to Miss Alexander, in both time and money, of the following specimens given by her, direct, to the Museum: 795 mammals, 336 birds, 3 reptiles, and 1 set of birds' eggs, from the Trinity Mountain region; 2 skulls of bears from Yellowstone Park; 2 mammals (*Scapanus* and *Putorius*) from Piedmont; 1 skin and skeleton of black bear from Siskiyou County; 4 beavers from the San Joaquin River, Stanislaus County; 2 skins and skeletons of fisher (*Mustela*) from Siskiyou County; 1 skin and skeleton of coyote from Stanislaus County; 1 skin and skull of fisher (*Mustela*) from Siskiyou County; 117 birds representing 22 species and 44 reptiles from the Hawaiian Islands.

Alexander, Miss Annie M., and Kellogg, Miss Louise, 66 mammals and 5 birds from Grizzly Island, Solano County.

Beck, H. H., 26 skulls of mammals (*Fiber*, *Sylvilagus*, etc.), 4 skins of opossum, 4 other mammals, all from Virginia.

Bennister, E. A., 194 sets of birds' eggs.

Bent, R. H., 13 birds and 33 mammals from Los Banos, Merced County.

Bleeker, John, 1 desert tortoise, from Kramer, Mohave Desert.

Bolles, J. H., 1 bird (*Macrorhamphus*) from Santa Barbara County.

Brewell, J. C., 20 reptiles from southern and central California.

Brown, V. S., 1 coon from Berkeley.

Bryant, Harold C., 18 birds, 3 mammals, 31 reptiles, from various localities in California.

Camp, Chas. L.: 5 batrachians from Berkeley; 2 reptiles from Marin and Los Angeles counties; 1 skull of badger from Napa County.

Chandler, Asa C., 1 bird (*Sphyrapicus*) from Berkeley.

Clake, F. C., 5 skins and 4 skulls of black-tailed deer from Mendocino County.



- Clay, C. Irvin, 4 birds (petrels) from Humboldt County.
- Cuthbert, E. R., 2 birds (swans) from Suisun marshes, Solano County.
- Dixon, Joseph, 1 skull of bear from Alaska, 6 birds (*Buteo* and *Dendroica*) from San Diego County.
- Drouillard, Joe, 6 skulls of large mammals and 1 skin of wolverine from the southern Sierra Nevada, in Inyo and Tulare counties.
- Elliott, R. H., 4 birds and 7 sets of eggs from Africa.
- Emerson, W. Otto, 13 mammals from Alameda, Sonoma, and Shasta counties.
- Fowler, A. M., 1 batrachian from East Oakland.
- Gilman, M. French, 4 birds (*Falco*) from Arizona.
- Gould, E. B., 1 bird (*Phainopepla*) from Lindsay, Tulare County.
- Green, C. de Blois, 3 skulls of bears (*Ursus charlottae*) from British Columbia.
- Grinnell, Hilda Wood, 1 reptile (*Bascanion*) from Contra Costa County, 1 reptile (*Gerrhonotus*) from Pasadena.
- Guintyllo, J., 1 mammal (*Myotis*) from Mohave Desert.
- Hagar, J. W., 2 mammals (*Lasiurus*) from Sutter County.
- Hall, Chas. L., 11 birds from the central Sierra Nevada.
- Hanna, Wilson C., 4 mammals (*Promops* and *Perognathus*) from Colusa, San Bernardino County.
- Hasselborg, Allen E., 12 birds (*Gavia*, *Melospiza*, etc.) from Alaska.
- Hawver, J. C., 2 birds (*Aluco*) from Placer County.
- Heger, R. H., 9 foreign birds.
- Herbert, Frank, 1 reptile from Piedmont.
- Holden, F. H., 29 mammals from the vicinity of Berkeley.
- Houston, R. R., 1 mammal (*Sorex*) from Byron, Contra Costa County.
- Judd, Percy L., 3 birds and 4 sets of eggs from Idaho.
- Kendall, F., 1 red fox from Nevada.
- Kleinschmidt, F., 1 bird (*Arquatella*) from St. Mathews Island, Alaska.
- Kofoed, Prof. Chas. A., 1 bird (*Spinus*) from Berkeley.
- Law, J. Eugene, 7 water birds from southern California.
- Lucas, C. A., 1 mammal (*Neotoma cinerea*) from Glenn County.

- Alhenny, E. A., skin and skull of bear (*Ursus luteolus*) from Louisiana.
- Archer, Loyal Holmes, 1 reptile (*Chionactis*) from Imperial County.
- Barber, Mrs. Ralph, 1 bird (*Calypste*) from Berkeley.
- Benson, N. C., jaw of bear from Indian mound.
- Bogle, W. H., 1 bird (*Asyndesmus*) from Galt, Sacramento County.
- Black, George D., 1 bird (hybrid quail, *Lophortyx Oreortyx*) from Oregon.
- Brace, W. D., 1 mammal (*Lasiurus*) from Live Oak, Sutter County.
- Briggs, Milton S., 2 birds (*Empidonax*) from Lake Tahoe.
- Brown, J. H., 2 birds (bobwhite) from Virginia.
- Brown, A. C., 7 foreign birds.
- Brumphard, Vernon, 1 bird (bobolink) from San Mateo County.
- Burns, Geo. E., 2 birds' nests from Mohave Desert, 15 mammals from the vicinity of Berkeley.
- Carver, Tracy I., 15 batrachians from San Francisco County, 3 mammals (moles) from San Leandro, Alameda County.
- Carth, H. S., 1 reptile (*Contia*) from Berkeley.
- Chis, Lansing K., 1 bird (*Ardetta*) from Kern County.
- Chis, Lloyd P., 12 bats and 41 reptiles from Kern County.
- Chis, W. S., 2 skins of the California grizzly bear (*Ursus horribilis californicus*), the last of the species taken in the Tejon country.
- Clymer, John E., 3 birds (casuals) from southern California.
- Cole, C. L., 1 bird (white pelican) from Oceanside, San Diego County.
- Cotter, John G., 1 mammal (*Perodipus*) and 3 birds (*Agelaius*) from Fresno County.
- Cummins, Carl, 1 skin of coyote from Inyo County.
- Cummins, G. B., 1 mammal (*Lynx*) from Inyo County.
- Cummins, S. R., 1 reptile (*Coleonyx*) from Inyo County.
- Cummins, Clarence, 1 mammal (fruit-eating bat) from the Dutch East Indies.
- Cummins, Harry E., 3 mammals (*Thomomys*) from Whitewater, Riverside County.
- Cummins, F. C., 3 birds (*Geothlypis*) from Arizona.
- Cummins, Lee, 1 mammal (mole) from Cedarville, Modoc County.

## LECTURES AND ADDRESSES\*

## SUMMER SESSION, 1910

Adams, E. D., Prof. of History, Stanford Univ.:

“British Cartoons on the American Civil War,” July 15.

Biddle, H. C., Asst. Prof. of Chemistry:

“Liquid Air,” July 28.

Burton, Richard, Prof. of English, Univ. of Minnesota:

“The Modern Novel,” June 27.

“Mark Twain and American Humor,” July 22.

Carter, J. B., Director of the American School of Classical Studies in Rome:

“Roman Religion,” July 4 and 7.

“The Master Builders of Ancient Rome,” July 25.

Curtis, H. D., Astronomer at the Lick Observatory:

“Halley’s Comet,” June 25.

MacKaye, P., Dramatist, of Cornish, New Hampshire:

“The Civic Functions of the Theatre,” July 19.

## FIRST HALF-YEAR 1910-11

## Education Department:

Babcock, E. B., Asst. Prof. of Agricultural Education:

“Co-operation between the Schools and the Agricultural Experiment Station,” Sept. 22.

Brookman, Miss T., of the Berkeley High School:

“High School Mathematics for the Average Student,” Nov. 10.

Carson, Dr. L. C., President of Mills College:

“The Relation of High School English to College English,” Oct. 5.

Koch, F. W., of the Lowell High School:

“The Relation of the Study of Physical Geography to the Industries of the State,” Sept. 29.

Lange, A. F., Prof. of Education and Dean of the Faculties:

“The Teacher as Leading Citizen,” Dec. 8.

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\*This list includes lectures delivered under the auspices of the University or connected organizations by visiting educators, public men, etc., and by members of the faculty outside of their regular course

Liddeke, F., Principal of the Fresno High School: Subject not announced, Dec. 1.

Merrill, G. A., Principal of the California School of Mechanical Arts:  
 "The Efficiency Curve of the High School Curriculum," Oct. 6.

Morgan, W. C., Asst. Prof. of Chemistry:  
 "Humanistic Science," Oct. 13.

Penfield, T. J., Principal of the Vacaville High School:  
 "Personality in the High School Teacher," Nov. 17.

Snyder, W. H., Principal of the Hollywood High School:  
 "High School Courses for Girls," Oct. 20.

Thacher, S. D., Principal of the Thacher School, Nordhoff, Cal.:  
 "The Development of a Country School for Boys," Sept. 8.

Thompson, G. C., Principal of the Alameda High School:  
 "The Future of High School Athletics," Sept. 15.

Williams, H. O., Principal of the Sacramento High School:  
 "Student Activities in the High School," Nov. 3.

#### Arvey Club:

D'Ancona, A. A., Dean of the Medical College:  
 "Careers in Medicine," Oct. 13.

Kofoed, C. A., Prof. of Zoology:  
 "The Coral Reefs of the Southern Pacific," Oct. 27.

Torrey, H. B., Assoc. Prof. of Zoology:  
 "Darwin," Dec. 1.

#### Philosophical Union:

Badé, W. F., Prof. of the Semitic Language and Literature, Pacific Theological Seminary:  
 "The Hebrew Moral Development," Nov. 18.

Kroeber, A. L., Asst. Prof. of Anthropology:  
 "The Moral Theory and Practice in Primitive Life," Oct. 28.

Linforth, I. M., Asst. Prof. of Greek:  
 "The Greek Moral Development," Dec. 10.

Overstreet, H. A., Assoc. Prof. of Philosophy:  
 "The Present Significance of Ethical and Social Problems for Philosophy," Sept. 30.

#### Physics Department:

Abbott, R. B., Instr. in Physics:  
 "Insulating High Voltage Transmission Lines," Nov. 18.

Elston, T. S., Instr. in Physics:  
 "The Sphere of Molecular Influence," Dec. 9.

Hall, E. E., Assoc. Prof. of Physics:

“Magnetic Rays,” Oct. 7.

Minor, R. S., Assoc. Prof. of Physics:

“Some Photo-electric Effects,” Oct. 28.

Slate, F., Prof. of Physics:

“Hydrodynamic Fields of Force,” Sept. 23.

**Sigma Xi Society:**

Cottrell, F. G., Asst. Prof. of Physical Chemistry:

“Some Aspects of the Smelter Fume Problem,” Oct. 4.

Holmes, S. J., Asst. Prof. of Zoology, University of Wisconsin:

“The Beginning of Intelligence,” Dec. 7.

**Other lectures:**

Finley, W. L., Lecturer and Field Agent, Nat. Assn. of Audubon Societies for the Protection of Birds and Animals:

“Home-life of Wild Birds,” under the auspices of the Cal. Museum of Vertebrate Zoology, Oct. 1.

Moses, B., Prof. of History and Political Science: Lectures on Latin-American Life:

“The Social Classes of Latin-American Society,” Nov. 2;

“Differences of National Character Among the Latin-Americans,” Nov. 9;

“The Problem of Government in Latin-America,” Nov. 16;

“Latin-American Politics,” Nov. 23;

“The International Union of American States,” Nov. 30;

“Some Phases of the Intellectual Life of Latin-America,” Dec. 7.

Noyes, G. R., Asst. Prof. of Slavie Languages:

“The Kievan Period of Russian History,” under the auspices of the Russian Circle, Oct. 13.

Oberhummer, E., Prof. of Geography in the Univ. of Vienna:

“The Principal Geographical Features of Austria-Hungary,” Sept. 29.

Paton, L. B., of the Hartford Theological Seminary:

“Palestine before the Hebrew Conquest,” under the auspices of the San Francisco branch of the Archaeological Institute of America, Sept. 14.

Richardson, L. J., Assoc. Prof. of Latin:

“The Education of the Roman Boy,” under the auspices of the Greek Club, Oct. 7.

Ryder, A. W., Asst. Prof. of Sanskrit:

“The Passion Play,” Nov. 21.



## SECOND HALF-YEAR 1910-11

## Deutscher Verein:

Demeter, L. J., Asst. Prof. of German:

“Albrecht Dürer and the Art of the Reformation,” Jan. 25;

“Woodcuts of Albrecht Dürer,” Mar. 1;

“Albrecht Dürer,” Mar. 29.

Putzker, A., Prof. of German Literature Emeritus:

“Linguistic Pleasures,” Mar. 15.

Schilling, H. K., Prof. of the German Language and Literature:

“500-jähriges Jubiläum der Universität Leipzig,” Feb. 15.

Senger, J. H., Assoc. Prof. of German:

“Deutsche Kinderlieder,” Apr. 12.

Earl Lectures—under the auspices of the Pacific Theological Seminary in the Greek Theatre:

Hon. Theodore Roosevelt:

“Realizable Ideals,” Mar. 24;

“The Home and the Child,” Mar. 25;

“The Bible and the Life of the People,” Mar. 26;

“The Public Servant and the Eighth Commandment,” Mar. 27;

“The Shaping of Public Opinion and the Ninth Commandment,”  
Mar. 28.

## Harvey Club:

Bryant, H., Fellow in Applied Zoology:

“The Work of the Agricultural Demonstration Train and the  
Economic Relation of Some California Birds and Mammals,”  
Mar. 21.

Grinnell, J., Director of the Cal. Museum of Vertebrate Zoology:

“Adaptive Habits and Structure of Arctic Animals,” Mar. 9.

Kofoid, C. A., Prof. of Zoology:

“Pearls and Pearl Fisheries,” Apr. 6.

## Hitchcock Foundation:

Reid, H. F., Prof. of Dynamical Geology and Geography, Johns Hopkins Univ.:

“General Characteristics of Earthquakes,” “Origin and Propagation of Earthquake Waves,” and “Practical Study of Earthquakes,” Mar. 28, 29, 30, 31, and Apr. 3, 4, 5, 6. (Topics of individual lectures not announced).

## Lick Astronomical:

Aitken, R. G., Astronomer at the Lick Observatory:

"The Binary Star System," Apr. 18;

"Life in Other Worlds," Apr. 19.

Wright, W. H., Astronomer at the Lick Observatory:

"Astronomical Instruments," Apr. 24 and 26.

## Local Zoology:

Grinnell, J., Director of the Cal. Museum of Vertebrate Zoology:

"Midwinter Birds of the University Campus," Jan. 27;

"Identification of Birds from their Songs and Actions," Jan. 30;

"Some Mammals of California and their Economic Relations,"  
Feb. 6;

"Harmless and Poisonous Reptiles of California," Feb. 13;

"The Spring Migration of Birds," Feb. 20;

"Nests and Eggs of Our Native Birds," Mar. 27.

Kofoid, C. A., Prof. of Zoology:

"The Primal Food Supply of the Sea," Apr. 3;

"The Relations of Animals of Our Neighborhood to the Causation  
and Spread of Disease; Tropical Diseases Brought to Our  
Coast," Apr. 9;

"Marine Borers in their Relation to Shipping Interests of the  
Pacific Coast," Apr. 17.

Merriam, J. C., Assoc. Prof. of Palaeontology and Historical Geology:

"Mammals of the Bay Region, of the Geological Period Immedi-  
ately Preceding the Present," Apr. 24.

Torrey, H. B., Assoc. Prof. of Zoology:

"The Food Fishes of the Vicinity," Feb. 27;

"The Sacramento Salmon," Mar. 6;

"The Oyster Problem," Mar. 13;

"The Story of a Barnacle," Mar. 20.

## Philosophical Union:

Adams, G. P., Asst. Prof. of Philosophy:

"The Significance of Ethical and Social Ideals for Metaphysics,"  
Apr. 28.

Becker, F. C., Instr. in Philosophy:

"Economic Organization and Ethical Ideals," Mar. 24.

Reed, T. H., Executive Secretary to the Governor of California:

"The State and Ethical Ideals," Apr. 7.

## Russian Circle:

Gruener, S.:

"The Works of Alexander Kuprin," Mar. 9.

Noyes, G. R., Asst. Prof. of Slavic Languages:

"The Kievan Period of Russian History," Apr. 6.

Sigma Xi Society:

Gay, F. P., Prof. of Pathology:

"Anaphylaxis," Mar. 1.

Murray, Sir John, of Edinburgh:

"The Floor of the Ocean," May 11.

Vertebrate Zoology and the Cooper Ornithological Club:

Coggins, H. L., of San Francisco:

"An Apology for Popular Ornithology," Apr. 1.

Miller, L. H., of the Los Angeles State Normal School:

"A Synopsis of Our Knowledge Concerning the Fossil Birds of the Pacific Coast," Apr. 1.

Other lectures:

Anderson, F. B., President of the Bank of California:

"Morals in Trade and Commerce," on the Weinstock Foundation, Feb. 15.

Aron, H., of the Philippine Medical School, Manila:

"Nutrition and Hygiene in the Tropics," Apr. 12 and 13.

Bartlett, D. W., Supt. of the Bethlehem Settlements, Los Angeles:

"The Better City," Apr. 10.

Daenell, E., Prof. of Mediaeval and Modern History, Univ. of Kiel, and Kaiser Wilhelm Exchange Prof. at Columbia Univ.:

"Germany and Present Political Conditions in Europe," Mar. 2.

Elston, T. S., Instr. in Physics:

"The Sphere of Molecular Influence," under the auspices of the Physics Dept., Feb. 10.

l'Estournelles de Constant, Baron, Member of the French Senate, Judge of the Hague Court, recipient of the Nobel Peace Prize:

"International Conciliation," Apr. 3.

Fisher, W. K., of Stanford Univ.:

"A Bird Metropolis of the Pacific," Apr. 1.

Friedlander, M., Prof. of Music, Univ. of Berlin:

"The Life and Work of Beethoven," Mar. 11;

"German Folk-Songs with Reference to American Folk-Songs," Mar. 14.

Harper, R. A., Prof. of Botany, Univ. of Wisconsin:

"Some Problems of Morphogenesis," annual Beta Kappa Alpha address, Apr. 28.

Leh, E. U., Supt. of the Henry Cowell Lime and Cement Works:

"The Manufacture of Cement," under the auspices of the Civil Engineering Assn., Feb. 16.

Lindley, C. H., President of the San Francisco Bar Assn.:

"Legal Ethics," under the auspices of the Law Assn., Feb. 14.

Noyes, G. R., Asst. Prof. of Slavic Languages:

"Reformation and the Catholic Reaction in Poland in the Sixteenth and Seventeenth Centuries," under the auspices of the Polish Circle, Feb. 28.

Riordan, J. H., of San Francisco:

"The Recall of the Judiciary," under the auspices of the League of the Republic, Jan. 25.

Somers, F. A., of San Francisco:

"The Commission Business," under the auspices of the Agriculture Club, Mar. 30.

Washburn, O. M., Asst. Prof. of Classical Archaeology:

"Modern Greece," Apr. 28.

#### SUMMER SESSION, 1911

Classical Assn. for Northern California, in California Hall:

Allen, J. T., Assoc. Prof. of Greek:

"A Proposed Reconstruction of the Course in Greek," July 1.

Deutsch, M. E., Instr. in Latin:

"The Teachers of the Teachers," July 1.

Foster, R. O., Asst. Prof. of Latin, Stanford Univ.:

"Live Latin," July 1.

Jernegan, P. F., of the San Jose High School:

"Latin in the Philippines," July 1.

Murray, A. T., Prof. of Greek, Stanford Univ.:

"Introduction to Greek," July 1.

Smith, L. R., of the Berkeley High School:

"The General Problem of Increased Efficiency in Latin Teaching," July 1.

Washburn, O. M., Asst. Prof. of Classical Archaeology:

"The Place of Archaeology in the Equipment of the Teacher," July 1.

History Section of the California Teachers' Assn., in California Hall:

Jordan, D. S., President of Stanford Univ.:

"War—the Other Side," July 15.

Mitchell, S. D., President of the Univ. of South Carolina:

"The Present Status of the Peace Movement," July 15.

her lectures:

Arnold, J. H., American Consul at Amoy:

"China," July 26.

Braden, G. W., Instr. in Physical Education, Occidental College:

"The Healing of the Out-of-Doors," July 24.

Coggins, H. L., of San Francisco:

"Birds as a Natural Resource," July 14;

"History and Structure of Birds," July 21;

"The Nest-Building of Birds," July 28.

Gearhart, Miss M., Supervisor of Drawing, Los Angeles City Schools:

"Development of the Imagination," Aug. 1.

Keyser, C. J., Prof. of Mathematics, Columbia Univ.:

"Ways to Pass the Walls of the World," July 21.

MacCaughy, V., of Hawaii:

"The Mountains of Hawaii," July 18;

"The Nature Study Idea," July 25.

Morgan, W. C., Asst. Prof. of Chemistry:

"Wizardry of Flame," July 12;

"Liquid Air," July 19;

"The World of Waste and the Latter Day Alchemists," July 26.

Shinn, C. H., of the U. S. Forestry Examiners:

"Forestry," July 26 and 28.

Spaeth, J. D., Prof. of English, Princeton Univ.:

"Socrates, or Teaching as a Fine Art," Aug. 2.

Young, Mrs. E. F., President of the N. E. A., Supt. of Schools, Chicago, Ill.:

President's address, under the auspices of the N. E. A., Greek Theatre, July 11.

Ziertmann, P., Oberlehrer at the Oberrealschule at Berlin-Steglitz, Germany:

"The Training of Teachers for the Elementary and Intermediate Schools in Germany," Aug. 1;

"The German Continuation Schools," Aug. 2;

"The Continuation School System of the City of Munich," Aug. 3.

#### FIRST HALF-YEAR 1911-12

Ceulo Hispánico:

Barrows, D. P., Prof. of Political Science and Dean of the Graduate School:

"Mexico in Revolution," Oct. 4.



Bolton, H. E., Prof. of American History:

"Some Experiences in the Archives of Mexico," Nov. 15.

Schevill, R., Prof. of Spanish:

"Spanish Ballads," Nov. 1.

Deutscher Verein:

Demeter, L. J., Asst. Prof. of German:

"München," Sept. 6.

Schilling, H. K., Prof. of the German Language and Literature:

"Saxony and Thuringia," Oct. 4.

Schraidt, F., Asst. in German:

"The Rhine," Nov. 15.

Harvey Club:

Bryant, H. C., Fellow in Applied Zoology:

"Relation of Birds to an Insect Outbreak," Oct. 19.

Merriam, C. H., Consulting Biologist, U. S. Dept. of Agr.:

"Concealing Coloration in Animals," Nov. 17.

Torrey, H. B., Assoc. Prof. of Zoology:

"Medicine of the Futures," Sept. 21.

Kosmos Club:

Becker, F. C., Instr. in Philosophy:

"Efficiency as a Social Ideal," Sept. 4.

Kofoed, C. A., Prof. of Zoology:

"The Relation of Socialistic Doctrines to Religion," Nov. 6.

Maxwell, S. S., Assoc. Prof. of Physiology:

"The University and Social Development," Oct. 2.

Merriam, J. C., Assoc. Prof. of Palaeontology and Historical Geology:

"The Formation of Public Opinion," Dec. 4.

Philosophical Union:

Lewis, C. I., Instr. in Philosophy:

"Professor Santayana and Idealism: a consideration of his criticism of Berkeley and the Transcendentalists. Status of the 'Ideals of Reason' and of Matter in His System," Nov. 24.

Rieber, C. H., Prof. of Logic:

"Naturalistic and Other Elements in the Philosophy of Professor Santayana," Sept. 29.

Santayana, G., Prof. of Philosophy, Harvard Univ.:

"The Genteel Tradition in American Philosophy," Aug. 25.

Torrey, H. B., Assoc. Prof. of Zoology:

"Modern Scientific Thought and Its Influence Upon Philosophy," Oct. 27.

## Physics Department:

Abbott, R. B., Instr. in Physics:

"Automatic Electric Valves and Commutators," Oct. 27.

Elston, T. S., Instr. in Physics:

"Resonance Spectra of Iodine Vapor," Nov. 24.

Lewis, E. P., Prof. of Physics:

"Spectrum and Chemical Properties of An Active Modification of Nitrogen Produced by the Electric Discharge," Sept. 29.

Minor, R. S., Assoc. Prof. of Physics:

"The Nature of White Light," Nov. 10.

Raymond, W. J., Assoc. Prof. of Physics:

"Resisted and Forced Vibrations," Oct. 13.

Slate, F., Prof. of Physics:

"Physical Mathematics," Sept. 15.

## Sigma Xi Society:

Snoll, W. S., Secretary State Board of Health:

"The Science of Applying the Facts of Science," Nov. 7.

Young, S. W., Prof. of Physical Chemistry, Stanford Univ.:

"The Recovery of Sulphur from Sulphuret Ores," Oct. 4.

## Other lectures:

Armes, W. D., Assoc. Prof. of American Literature:

"Chaucer's England," Nov. 21.

Bacon, B. W., Prof. of New Testament Criticism and Exegesis, Yale Univ.:

"Herod, the Hellenizer and the Monuments of His Age," under the auspices of the San Francisco Society of the Archaeological Institute of America, Sept. 13.

Bacon, L., Instr. in English:

"Academic Prize Poetry, with special reference to the Emily Chamberlain Cook Competition," Dec. 8.

Bennett, E.:

"City Plans," under the auspices of the architectural dept., Nov. 23.

Eshleman, J. M., President of the Railroad Commission of California:

"An Explanation of the Proposed Railroad Amendments to the California State Constitution," Oct. 6.

Galbreth, Mrs. L. M.:

"Vocational Guidance," Nov. 21.

George, H.:

"The Single Tax," Oct. 20.

Herzog, R., Novelist, Berlin:

"Ueber Lebensbejahung und eigene Dichtung," Nov. 3.

Hornbostel, Prof. of Architecture in the Carnegie Technical Schools:

"The Architecture of Yucatan," Oct. 23.

Knapp, C., Prof. of Classical Philology, Columbia Univ.:

"The Roman Theatre," under the auspices of the San Francisco Society of the Archaeological Institute of America, Dec. 7.

Pardee, G. C., ex-Governor of California:

"Conservation," under the auspices of the Commerce Club, Nov. 22.

Pillsbury, A. J., Chairman of the Industrial Accident Board:

"The Workmen's Compensation Act," Nov. 13.

Postnikov, F. A.:

"Aerial Navigation in the Russo-Japanese War," under the auspices of the Russian Circle, Oct. 25.

Rhead, F. H., Instr. in Pottery and Designs in the Government Art Schools in England, and Art Director of the Wardle Art Pottery in Staffordshire:

"Pottery," under the auspices of the Art History Circle, Sept. 14.

Winkenwerder, H., Assoc. Prof. of Forestry, Univ. of Washington:

"The Field of Forestry," Nov. 13;

"The Training of the Forester," Nov. 14;

"Forests and American History," Nov. 15.

## SECOND HALF-YEAR 1911-12

Earl Lectures—under the auspices of the Pacific Theological Seminar in Harmon Gymnasium:

Perry, B., Prof. of English Literature, Harvard University:

"The American Race, Nation and Book," Apr. 9;

"The American Mind," Apr. 11;

"American Idealism," Apr. 12;

"American Romance and Reaction," Apr. 16;

"American Humor and Satire," Apr. 18;

"American Individualism and Fellowship," Apr. 19.

Forestry Club:

Homans, G. M., State Forester:

"The Forest Policy for California," Apr. 17.

Meinecke, E. P., of the U. S. Dept. of Agr.:

"Life of the Forest," Mar. 12.

Tieman, H. D., of the U. S. Forest Service, Madison, Wis.:

"The Microscopic Structure of American Woods," Mar. 27.

## Hitchcock Foundation:

Pearce, R. M., Prof. of Research Medicine, University of Pennsylvania:

"Antiquity to 1800. The Efforts of Isolated Investigators,"  
Jan. 22;

"The Development of Laboratories for the Medical Sciences,"  
Jan. 23;

"Pasteur and the Rise of Bacteriology," Jan. 24;

"Present Day Methods and Problems in Medicine," Jan. 25;

"Medical Research in American Universities; Present Facilities,  
Needs and Opportunities," Jan. 26.

## Cosmos Club:

Barrows, D. P., Prof. of Political Science, and Dean of the Graduate  
School:

"Political Parties as Instruments of Social Reform," Feb. 5.

Hutchinson, L., Asst. Prof. of Commerce, on the Flood Foundation:

"Ethics and International Relations," Apr. 1.

Rugh, C. E., Assoc. Prof. of Education:

"The Machinery of Social Reform," Mar. 4.

## Law Association:

Donahue, W. H., District Attorney of Alameda County:

"Prevention vs. Prosecution," Feb. 20.

Stetson, J. W., of Oakland:

"The Public Utilities Commission," Mar. 21.

Thelen, M., Attorney to the State Railway Commission:

"The Public Utilities Commission," Mar. 21.

## League of the Republic:

Barrows, D. P., Prof. of Political Science:

"Powers and Responsibilities of the Governor," Apr. 2.

Brown, E. J., of Oakland:

"The Attitude of the State Toward the Criminal," Mar. 19.

Casey, H. K., Captain of the First Artillery, U.S.A.:

"Needs of the National Guard," Apr. 9.

Cushing, O. K., of San Francisco:

"The Treatment of First Offenders," Feb. 13.

Howard, B. E., Prof. of Political Science, Stanford Univ.:

"Democracy and Education," Apr. 16.

Johnston, J. A., of the State Board of Control:

"Work of the State Board of Control," Apr. 23.

Loomis, F. B., Asst. Sec. of State under President Roosevelt:

"American Supremacy in the Caribbean Republics," Feb. 20.

Nye, A. B., State Controller:

“The State Budget,” Feb. 6.

Pillsbury, A. J., Chairman of the State Industrial Accident Board:

“The Rationale of Workmen’s Compensation,” Jan. 23.

Plehn, C. C., Prof. of Finance, on the Flood Foundation:

“Taxation in California,” Mar. 12.

Reed, C. W., of San Francisco:

“A Civil Service Law for California,” Jan. 30.

Ritter, W. E., Prof. of Zoology:

“A Biologist’s Interpretation of the Man Before the Dollar,”  
Apr. 24.

Snow, W. F., of the State Bureau of Public Health:

“Public Health Administration,” Mar. 26.

Stetson, J. W., of Oakland:

“County Government Reorganization,” Feb. 27.

Thelen, M., Attorney to the State Railway Commission:

“Administration of the Public Utilities Law,” Mar. 5.

#### Lick Astronomical:

Aitken, R. G., Astronomer at the Lick Observatory:

“The Milky Way,” Apr. 2.

“Double Stars,” Apr. 4.

Campbell, W. W. Director of the Lick Observatory:

“Stellar Motions,” Apr. 9 and 11.

Curtis, H. D., Astronomer at the Lick Observatory:

“The Distances of the Stars,” Apr. 23;

“The Tail of the Comets,” Apr. 25.

#### Local Zoology:

Grinnell, J., Director of the Cal. Museum of Vertebrate Zoology:

“Midwinter Birds on the University Campus,” Jan. 22;

“Identification of Birds from Songs and Actions,” Jan. 29;

“Some Mammals of California and their Economic Relations,”  
Feb. 5;

“Water Birds of San Francisco Bay,” Feb. 12 and 26;

“Nests and Eggs,” Apr. 15.

Ritter, W. E., Prof. of Zoology:

“The Reptiles of California, Especially the Poisonous Varieties,”  
Mar. 4;

“The Frogs, Toads, and Salamanders of Berkeley and Vicinity,”  
Mar. 11;



"The Purposes of the San Diego Marine Biological Station,"  
Mar. 18;

"Work of the San Diego Marine Biological Station," Mar. 25  
and Apr. 1.

Torrey, H. B., Assoc. Prof. of Zoology:

"Instinct and the Beginning of Intelligence in Organisms,"  
Apr. 22;

"Instinct and Intelligence in the Higher Animals," Apr. 29.

Philosophical Union:

Brown, W., Instr. in Psychology:

"The Ground and Validity of Judgments of Worth," Jan. 26.

Pope, A. U., Asst. Prof. of Philosophy:

"Naturalism and Ethics," Feb. 23.

Smith, A. M., of the Pacific Unitarian Seminary:

"The Relation of Aesthetic to Religious Values," Mar. 29.

Vocational Opportunities for Women:

Brown, Dr. Adelaide:

"Medicine," Apr. 11.

Cheney, Mrs. M. L., Appointment Secretary:

"Vocational Guidance," Mar. 7.

Lange, A. F., Prof. of Education, and Dean of the Faculties:

"The Relation of Vocational to General Training," Apr. 18.

Morgan, Miss J., of San Francisco:

"Architecture," Feb. 15.

Rich, Miss E., President of the Santa Barbara State Normal School:

"Domestic Science," Feb. 1.

Simpson, Mrs. E. S., of San Francisco:

"Journalism," Apr. 4.

Snow, W. F., of the State Bureau of Public Health:

"Public Health Service," Mar. 21.

Weinstock, H., of San Francisco:

"Business," Mar. 28.

Other lectures:

Armes, W. D., Assoc. Prof. of American Literature:

"Shakespeare's England," Feb. 23.

Blaisdell, J. A., President of Pomona College:

Phi Beta Kappa Annual Address, May 10.

Cooke, A. J., of the State Horticultural Commission:

"The State Horticulture Commission," before the Agriculture  
Club, Apr. 9.

Dayal, Har, Lecturer in Hindu Philosophy, Stanford Univ.:

“The Problems and Systems of Hindu Philosophy,” Apr. 19.

Faversham, W.:

“The Theatre as a Power,” Apr. 8.

George, W. R., of the George Junior Republic:

“The George Junior Republic and the Delinquent Child,” Mar. 5.

Gregory, C. R., of the University of Leipzig:

“Mount Sinai: Its Monasteries and Manuscripts,” Jan. 19.

Jenkins, Miss C., of Oakland:

“The Place of Music in Education,” Mar. 2.

Levy, J. L., Rabbi of the Temple, Pittsburgh:

“Business Honor,” on the Weinstock Foundation, Feb. 21.

Lewis, A., of Oakland:

“The Struggle Point,” under the auspices of the Intercollegiate Socialist Society, Apr. 10.

Paszkowski, W., of the University of Berlin:

“Luther, Goethe und Bismarek,” Apr. 1;

“Das Deutsche Theater,” Apr. 2;

“Die Deutsche Press,” Apr. 3.

Redding, J. D., of San Francisco:

“The Identity of William Shakespeare,” Feb. 2.

Smith, A. H., of China:

“China: the Nation of Perplexity,” Mar. 31.

Wheeler, B. I., President of the University:

“The College Man and the Bible,” before the Y. M. C. A., Feb. 9.

Whitney, A. W., Assoc. Prof. of Mathematics and of Insurance Methods:

“Fire Insurance and the Public,” before the Sigma Xi Society, Feb. 7.

## DEATHS OF MEMBERS OF THE UNIVERSITY

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- offman, Henry Wilson, of the class of 1914, College of Agriculture,  
February 21, 1912.
- avidson, George, Professor of Geography, Emeritus, December 1, 1911.
- aylord, Wallace Kendall, Assistant in Chemistry, March 19, 1912.
- reenleaf, General Charles R., Honorary Professor of Military and  
Public Hygiene, September 3, 1911.
- esse, Frederick Godfray, Professor of Hydraulics, Emeritus, January  
27, 1911.
- hnson, Frank Edward, Instructor in Soils, January 12, 1912.
- hnson, Frank S., a Regent of the University, June 22, 1911.
- le, the Rev. Albert Franklin, of the class of 1864, November 8, 1910.
- acdonald, John, Engineer at the Lick Observatory, September 18, 1910.
- uphael, Abraham, of the class of 1914, College of Civil Engineering,  
February 6, 1912.
- instein, Jacob Bert, a Regent of the University, April 16, 1911.
- ynolds, Mildred D., of the class of 1912, College of Social Sciences,  
November 29, 1910.
- owell, Chester A., a Regent of the University, May 23, 1912.

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## PUBLISHED WRITINGS OF OFFICERS OF THE UNIVERSITY

(July 1, 1910, to July 1, 1912)

ABBOTT, R. B., Instr. in Physics.

Simple Methods of Determining the Horizontal Component of the Earth's Magnetic Field. (*School Science and Mathematics*, vol. xii, no. 6, p. 533; June, 1912.)

ADAMS, G. P., Asst. Prof. of Philosophy.

Beyond Moral Idealism. (*Harvard Theological Rev.*, vol. iv, p. 229; Apr., 1911.)

Mystical Element in Hegel's Early Theological Writings, The. (*U. C. Publ. in Philosophy*, vol. ii, no. 3; July, 1910.)

AITKEN, R. G., Astronomer in the Lick Observatory.

Astrographic Catalogue, The. (*Publ. A. S. P.*, vol. xxiii, p. 245; Sept., 1911.)

Definition of the Term Double Star. *Astron. Nach.*, vol. clxxxiii, p. 281; [Also note on, in], (*Publ. A. S. P.*, vol. xxiii, p. 172; March, 1911.)

Double Star O $\Sigma$  251, The. (*Ibid.*, vol. xxii, p. 140, Aug., 1910.)

Double Star Notes. (*Ibid.*, p. 137, Aug., 1910.)

Earthquake of July 1, 1911, The. (*Ibid.*, vol. xxiii, p. 200, Aug., 1911.)

Giovanni Virginio Schiaparelli [Obituary.] (*Ibid.*, vol. xxii, p. 164, Oct., 1910.)

Life on Other Worlds. (*Jour. Roy. Astron. Soc., Canada*, vol. v, p. 291, Oct., 1911.)

Masses of Visual Binary Stars, The. (*Pop. Astron.*, vol. xviii, p. 483, Oct., 1910.)

Measures of the Satellites of Uranus in 1910 and 1911. (*L. O. B.* vol. vii, no. 207, p. 1, Jan., 1912.)

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\*See list of abbreviations at conclusion of the bibliography.

- New Double Stars. (Publ. A. S. P., vol. xxiii, p. 245, Oct., 1911.)
- Number of Optical Pairs Among Close Double Stars. (Ibid., vol. xxiv, p. 126, Mar., 1912.)
- Observations of Comets *e* 1909 and *a* 1910. (L. O. B., vol. vi, no. 189, p. 73, Oct., 1910.)
- Observations of Comet *C* 1911. (Ibid., vol. vi, no. 202, p. 159, Aug., 1911.)
- Observations of Halley's Comet. (Ibid., no. 189, p. 74, Oct., 1910.)
- Observing List for the Determination of the Relative Masses in Visual Binary Systems. (Ibid., vol. vii, no. 208, p. 3; Jan., 1912.)
- One Hundred New Double Stars, Sixteenth List. (Ibid., vol. vi, no. 184, p. 62; Sept., 1910.)
- One Hundred New Double Stars, Seventeenth List. (Ibid., no. 188, p. 70; Dec., 1910.)
- One Hundred New Double Stars, Eighteenth List. (Ibid., no. 204, p. 163; Oct., 1911.)
- Orbits of the Double Stars  $\beta$  101,  $\beta$  581,  $O\Sigma$  79 and  $O\Sigma$  235. (Publ. A. S. P., vol. xxix, p. 170; June, 1912.)
- Visual Observations of Halley's Comet, January-May, 1910. (Ibid., vol. xxii, p. 134; Aug., 1910.)
- ALEXANDER, E. W., Asst. in Ophthalmology.
- Pathological Conditions of the Eye Secondary to Disease of the Lymphatics of the Neck and Throat, The. (Cal. State Med. Jour., vol. x, no. 6, p. 255; June, 1912.)
- Thrombosis of the Central Retinal Vein. (Cal. State Jour. Med., vol. ix, no. 11, p. 483; Nov., 1911.)
- Tuberculosis of the Uveal Tract, with Presentation of Case. (Ibid., no. 5, p. 200; May, 1911.)
- ALVAREZ, A. C., Instr. in Civil Engineering.
- Laboratory Instructions for Tests of Cement, Mortar and Concrete. [With Charles Derleth, Jr.] (The University Press; Jan., 1912.)
- Laboratory Instructions for Tests of Metal, Timber, Brick and Concrete. [With Charles Derleth, Jr.] (Ibid.; June, 1912.)
- AMES, W. D., Assoc. Prof. of American Literature.
- First Fruit of the Renaissance in England, More's "Utopia," A. (Univ. of Cal. Chronicle, vol. 13, no. 3, p. 289; 1911.)
- Lawthorne's Smoking. (The Nation, vol. 92, no. 2383, p. 214; Mar. 2, 1911.)



Rabelais and More's "Utopia." (The Nation, vol. 93, no. 2402, p. 3; July 13, 1911.)

Utopia of Sir Thomas More; edited, with introduction, notes, and glossary, The. (The Macmillan Company; 1912.)

BABCOCK, E. B., Asst. Prof. Agricultural Education.

Coöperation Between the Schools and the College of Agriculture (U. C. Chron., vol. xiii, no. 3; March, 1911.)

Development of Secondary School Agriculture in California. (U. Agr. Exp. Sta. Cir., no. 67; Aug., 1911.)

Elementary School Agriculture (Teachers' Manual), [with C. A. Stebbins.] (MacMillan & Company; 1911.)

Elementary School Agriculture. (Sierra Educational News, vol. v, no. 8, p. 38; Oct., 1911.)

High School Agriculture Subjects Accepted for Matriculation University of California. [With W. G. Hummell.] (U. C. Agr. Exp. Sta. Special Cir; May, 1912.)

How we Coöperate With the Public Schools. (U. C. Agr. Exp. Sta. Special Cir.; Dec., 1911.)

Information for Students Concerning College of Agriculture. (U. Agr. Exp. Sta. Cir. [revised], no. 52; July, 1911.)

Nature-Study and the Garbage Barrel. (Nature-Study Review, vol. viii, no. 3, p. 99; Mar., 1912.)

Review of the Work of the Agricultural Education Division of the College of Agriculture, A. (U. C. Chron., vol. xiv, no. 1; Jan. 1912.)

School Garden City; Its Possibilities, The. (Sierra Educational News, vol. vii, no. 10, p. 39; Dec., 1911.)

School Garden in the Course of Study, The. [With C. A. Stebbins.] (U. C. Agr. Exp. Sta. Cir., no. 62; May, 1911.)

Some Needs of Agriculture in California. (Trans. of Commonwealth Club of California, vol. vi, no. 7, p. 483; Nov., 1911.)

Teratology in Juglans Californica Wats. (The Plant World, vol. xiii, no. 2, p. 27; Feb., 1910.)

Tree Growing in the Public Schools [with H. A. Greene.] (U. Agr. Exp. Sta. Cir., no. 59; Jan., 1911.)

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Walnut-Oak Hybrid Experiments. (Rep. Am. Breeders Ass'n, vol. vi, p. 138; 1911.)

- ERSON, L., Instr. in Composition and Rhetoric.  
 Life and Death of Beowulf, The. (U. C. Chron., vol. xiv, no. 2, p. 182; Apr., 1912.)
- ERLOW, W. J., Dean and Prof. of Medicine, Los Angeles Dept., College of Medicine.  
 Climate in the Treatment of Pulmonary Tuberculosis. (Jour. Am. Med. Ass'n, vol. lvii, p. 1426; Oct. 31, 1911.)
- Definition of Climatic Therapeutics and Diseases Benefited by Climatic Treatment. (Modern Med., edited by H. A. Hare, M.D., Lea & Febiger, New York, vol. i, pt. 2, p. 133; Oct., 1910.)
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- Medical Organizations and Conservation of Public Health [President's Address at the Annual Meeting of the Los Angeles County Medical Ass'n.] Cal. State Jour. Med., vol. x, no. 54; Feb., 1912.)
- BETROWS, D. P., Prof. of Political Science.  
 Conservation Policy for the Philippines, A. (Rep. of 28th Annual Lake Mohonk Conference, p. 86; Republished also in the Southern Workman.)
- Government and Public Instruction in Netherlands-India. (Rep. of U. S. Comm. of Education, 1911, vol. i, p. 454; 1912.)
- Blongot or Ibilao of Luzon, The. (Popular Science Monthly, vol. lxxvii, no. 6, p. 521; Dec., 1910.)
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- Introduction to "Industrial Studies and Exercises," by O. S. Reimold. (Ibid.; 1910.)
- Negrito and Allied Types in the Philippines, The. (Am. Anthropologist, vol. xii, no. 3, p. 358; July-Sept., 1910.)
- Revolution in Mexico, The. (U. C. Chron., vol. xiii, no. 4, p. 438.)
- What May Be Expected from Philippine Education. (Jour. of Race Development, Clark Univ., Mass., vol. i, no. 2, p. 156; Oct., 1910.)
- BURKER, F. C., Instr. in Philosophy.  
 Review of William Jerusalem's Introduction to Philosophy. (Jour. of English and Germanic Philology, vol. xi, no. 2, p. 274; Apr., 1912.)
- BURNETT, C. B., Asst. in Physiological Chemistry.  
 Demonstration of "Masked" Iron in Blood, The. (U. C. Publ. Physiology, vol. iv, no. 13, p. 107; Mar. 19, 1912.)

Purines of Muscle, The. (Jour. Biological Chemistry, vol. xi, no. p. 221; Apr., 1912.)

BERNSTEIN, B. A., Instr. in Mathematics.

Note on the Graphical Solutions of the Fundamental Equations in the Short Methods of Determining Orbits [with A. O. Leuschner] (Bull. Am. Mathematical Soc., vol. xviii, no. 6, p. 294; Mar., 1912)

BIDDLE, H. C., Asst. Prof. of Chemistry.

Conversion of Cinchonine and Quinine into their Poisonous Isomers Cinchototine and Quinotoxine, and the Relation of this Conversion to the Toxicity of the Cinchona Alkaloids, The. (Jour. Am. Chem. Soc., vol. xxxiv, no. 4, p. 500; Apr., 1912.)

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On the Composition of Certain Substances Produced by the Action of Pepsin upon the Products of the Complete Peptic Hydrolysis of Casein [with T. B. Robertson.] (Jour. Biol. Chemistry, vol. i, nos. 3 and 4, p. 295, May, 1911.)

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BINE, R., Asst. in Medicine.

Nephritis, The Dietetic Treatment of. (Cal. State Jour. Med., Nov., 1910.)

Obesity, Its Etiology and Treatment. (Ibid.; June, 1911.)

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BIOLETTI, F. T., Assoc. Prof. of Viticulture.

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Bouschet Grapes. (Pac. Rural Press; Mar. 4, 1912.)

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Extermination of Morning Glory. (U. C. Agr. Cir. no. 49; Aug. 1911.)

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## SUNDAY HALF-HOURS OF MUSIC IN THE GREEK THEATRE

(OPEN TO THE PUBLIC)

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 1910

- uly 3—Robert H. Thomas, baritone; Vincent de Arrillaga, pianist.
- uly 10—Miss Emmabelle Hudson Zucker, soprano, with Miss Florence Nachtrieb, accompanist; Thomas P. Nowlan, tenor, with H. B. Pasmore, accompanist.
- uly 17—Thomas W. Hindley, baritone; Miss Lola G. Gwinn, pianist.
- uly 24—U. S. Naval Training Station Band, Rosario Cataldo, U. S. N., bandmaster.
- ug. 28—Victor de Gomez, 'cellist; Miss Alberta Livernash, pianist.
- ept. 4—Hubert Clyde Linscott, '06, baritone, with Mrs. William Aydelott, accompanist.
- ept. 11—Howard Eugene Pratt, tenor, with Miss Edith Ladd, accompanist.
- ept. 18—M. M. I. Myers, pianist; Miss Lily Lillian, soloist.
- ept. 25—Sir Henry Heyman's pupils: Miss Madeleine Todd and James H. Todd, violin; Mrs. Edwin H. Garthwaite, piano; Frank Howard, violincello; Miss Mamie E. Moynihan, accompanist.
- ct. 2—Carolus Lundine, basso, with Roscoe Warren Lucy, accompanist.
- ct. 9—Quartette: Miss Jessie M. Murray, Miss Helen W. Thomas, Miss Adele L. Alexander, Miss Eva H. Gruninger, and a chorus of thirty voices, pupils of Mrs. Carroll Nicholson, with Mrs. Clarke Pomeroy, accompanist.
- ct. 16—Paul Hunt, baritone, with Mrs. Robert M. Hughes, accompanist.
- ct. 23—Mrs. Blanche Ashley and pupils, solo pianists, assisted by Hother Wismer, violin, Miss Viola Furth, viola, and Arthur Weiss, violincello, under direction of Miss Mary Pasmore.

- Oct. 30—The Oakland Orpheus, Edwin Dunbar Crandall, director, Mrs. Robert M. Hughes, accompanist.
- Nov. 6—Bentley Nicholson, tenor, with Ashley Pettis, accompanist.
- Nov. 13—The Girls' Glee Club of the Lowell High School, H. B. Pasmore, director, with Miss Martha Gans and Miss Mary Pasmore, accompanists.
- Nov. 20—Miss Lulu E. Pieper, soprano, Chester Herold, tenor, with Earl Towner and H. B. Pasmore, accompanists.
- Nov. 27—F. A. Ballaseyus, pianist.
- Dec. 4—Miss Muriel Andrews, violinist, with Miss Lola G. Gwin, accompanist.
- Dec. 11—The Treble Clef Club of the University of California, Paul Steindorff, director.

## 1911

- Feb. 26—Miss Emmabelle Hudson Zucker, soprano, Lowell More Redfield, baritone, George Powell Chatterly, violinist, Count Axel Raoul Wachtmeister, pianist.
- Mar. 12—The United States Naval Training Station Band, T. J. Kennedy, bandmaster.
- Mar. 19—Miss Jessie Dean Moore, with Miss Estelle Southworth, accompanist.
- Apr. 2—The Treble Clef Club of San Francisco: Mrs. Milton McMur-ray, president; Paul Steindorff, director; William Goodrum, accompanist.
- Apr. 9—Miss Mary Sherwood, 'cellist, with Mrs. R. M. Hughes, accompanist; Miss Sophye Rottanzi, soprano, with H. B. Pasmore, accompanist.
- Apr. 16—University of California Glee Club and the De Koven Clubs: Clinton R. Morse, director; R. M. Ford, accompanist; assisted by H. Warner Sherwood, '13, violinist; Miss Mary Sherwood, accompanist.
- Apr. 23—Ashley Pettis, pianist.
- May 7—Women's Mandolin and Guitar Club of the University, assisted by the Ukulele Club of the University and Miss Edith Mote, soprano.
- July 2—Miss Muriel Andrews, violinist, assisted by Burton Sampson, violinist, and Miss Lola G. Gwin, accompanist.
- July 9—Robert D. McClure, baritone, with Miss Walton, accompanist.

- ly. 16—Miss Esther Louise Houk, contralto, with Frederick Maurer, Jr., accompanist.
- ly. 23—Chester Herold, dramatic tenor, with Mrs. Lucian M. Brinker, accompanist.
- ly. 30—Fifth Regiment Band, N. G. C., George W. Hollister, bandmaster; assisted by Miss Nita Abbott, prima donna soprano.
- ag. 27—The U. S. Naval Training Station Band, T. J. Kennedy, bandmaster; assisted by R. B. Kanoise, baritone.
- pt. 3—Miss Kate Christie, violinist, with Miss Mildred Turner, accompanist.
- pt. 10—Charles F. Robinson, bass, with Frederick Maurer, Jr., accompanist.
- pt. 17—Miss May Fitzgerald, '10, pianist, and Arne Hoisholt, '12, 'cellist.
- pt. 24—Lester Donahue, pianist; Ernest Paul Allen, violinist; with Mrs. Rose Leaves Allen, accompanist.
- pt. 1—Carolus Lundine, basso cantate, with Roscoe Warren Lucy, accompanist.
- pt. 8—Georg Krüger, pianist.
- pt. 15—Miss Sophye Rottanzi, soprano, assisted by Miss Elizabeth Dolan, violin, Hjalmar Holmes, violincello, and H. B. Pasmore, accompanist.
- pt. 22—Mrs. Fanny Ellsmore Larsen, pianist; Sanford Bennett, baritone; Marshall W. Giselman, accompanist.
- pt. 29—Miss Aileen Murphy, pianist, Miss Ora Heckell, soprano.
- ov. 5—Miss Ora Heckell, dramatic soprano; Miss Ruby Moore, contralto; Miss Millicent Talbot, soprano; Hermann Hiller, baritone; and Frederick Maurer, Jr., accompanist.
- ov. 12—Miss Rey Del Valle, soprano; Uda Waldorp, pianist.
- ov. 19—Metropolitan Male Quartette: O. T. Smyth, M. S. Morrison, W. E. Whigam, W. H. Grandeman, Miss Maud E. Steiner, accompanist, with W. E. Whigam, director.
- ov. 26—The Treble Clef Club of San Francisco: Mrs. Milton McMurray, president; Paul Steindorff, musical director; William Goodrum, accompanist.
- le. 3—Robert H. Thomas, baritone; Vincent de Arrillaga, pianist.
- le. 10—Madame von Meyerinck, presenting Miss Helen Danielsen, soprano, and Miss Lillian Lineer, soprano; Herbert von Meyerinck, clarinetist; Stanley Sprague, accompanist.

1912

- Feb. 25—Columbia Park Boys' Club Band, Conrad Horst, bandmaster.
- Mar. 3—Rudolph C. Post, baritone, assisted by Mrs. Carolyn R. Elliott, soprano; Miss Ethel Taylor, violinist; and Miss Margaret A. McCann, accompanist.
- Mar. 10—Choir of the First Baptist Church, Berkeley; F. A. Woodward, director; Miss Walton, accompanist.
- Mar. 17—Mrs. William M. Madden, soprano; Miss Beatrice Clifford, pianist; Herbert von Meyerinck, clarinetist; and Miss Loh Gwin, accompanist.
- Mar. 24—Miss Estelle Gray, violinist; Mrs. Delia Donald-Ayer, dramatic soprano; and Lynwood Sibley, pianist.
- Mar. 31—Girls' Glee Club of the Lowell High School, San Francisco, assisted by Miss Elizabeth Dolan, soprano; Miss Judith Reusch, contralto; Thomas W. Pearson, baritone; H. B. Pasmore, director; Miss Anita Wales, accompanist.
- Apr. 7—University of California Glee Club and the De Koven Club; Clinton R. Morse, director; Roscoe Warren Lucy, accompanist.
- Apr. 14—The Hughes Club, D. P. Hughes, conductor, Mrs. Robert M. Hughes, accompanist.
- Apr. 21—University Cadet Band, Captain Leroy W. Allen, director.
- Apr. 28—Treble Clef Club of the University of California, Chorus; Paul Steindorff, director; the Women's Mandolin and Guitar Club of the University of California, Richard Carpenter, director.
- May 5—The Minetti Orchestra, Giulio Minetti, director.
- June 30—Miss Esther Houk, contralto; Warren D. Allen, pianist.



## UNIVERSITY MEETINGS\*

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 1910

- Ag. 22—President Benjamin Ide Wheeler.
- Spt. 2—Henry Churchill King, President of Oberlin College.  
Richard Burton, Prof. of English Literature, University of Minnesota.
- Spt. 16—H. Morse Stephens, Prof. of History.  
Rudolph Schevill, Prof. of Spanish.
- Spt. 30—Rev. Frederick W. Clampett, Minister of Trinity Church, San Francisco.  
President Benjamin Ide Wheeler.
- Oct. 14—Rev. Charles R. Brown, Minister of the First Congregational Church, Oakland.  
Music: trio of students; duet of students.
- Oct. 28—Music: University Orchestra; Treble Clef Society; piano solo by Miss E. F. Black, '13; Women's Mandolin Club; University Glee Club; University Band.
- Nv. 11—Judge Fletcher A. Cutler, Attorney to the Regents.  
Fred Goodrich Athearn, Superintendent of Railway Clubs, Southern Pacific Co.  
Music: University Band; cornet quartette of Band.
- Dec. 2—Rev. Peter C. Yorke, of St. Anthony's Church, Oakland; Regent of the University.  
Music: mixed double quartette of students; piano solo by Douglas Soule, '11; Men's Mandolin Club.

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 1911

- Jan. 20—Rev. Charles L. Kloss, Acting Minister of the First Congregational Church, Oakland.  
Music: University Glee Club.

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\* The university meetings are held on alternate Fridays at eleven o'clock, when all other university exercises are suspended.

- Feb. 3—Clayton Cooper, of the International Committee of the Y.M.C.A.  
Joseph Fels, public lecturer on the single tax.  
Music: soprano solo by Miss Phyllis Maguire, '13; 'cello solo  
Arne Hoisholt, '12.
- Feb. 17—Rev. Charles F. Aked, of New York City.  
James A. B. Scherer, President of Throop Polytechnic Institute  
Pasadena.  
Music: quartette of women students; Men's Mandolin Club.
- Mar. 3—John Eshleman, President of the State Railroad Commission  
Ernst Daenell, Prof. of Mediaeval and Modern History in the  
University of Kiel, and Kaiser Wilhelm Exchange Prof. at  
Columbia Univ.  
Music: cornet solo by Leroy Allen, '12; vocal solo by Mabel  
Clinch, '11; vocal trio of students.
- Mar. 17—James A. MacDonald, Editor of the Toronto Globe.  
Rev. D. D. MacLaurin, of Spokane, Wash.  
Music: vocal quartette of women students; violin solo by  
H. Warner Sherwood, '13.  
Baron von Moltke, Minister to the United States from Denmark.
- Mar. 31—Music: University Orchestra; Treble Clef Society; violin solo  
by H. Warner Sherwood, '13; women's quartette; Women's  
Mandolin Club; University Glee Club; University Band.
- Apr. 14—Hon. Julean H. Arnold, American Consul at Amoy, China.  
Hon. John W. Stetson, Member of the State Senate.  
Music: double quartette of students; vocal solo by Miss Alice  
McComb.
- Apr. 28—Newton B. Drury, Miss Cheryl A. Merrill, Everett L. Ball  
William G. Donald, William H. Greenlaw, Jr., Miss Rose  
Gardner, Jay Dwiggins, Jr., Arthur C. Prendergast, David T.  
Babeock, Robert H. Moulton, George A. Haines.
- Aug. 21—President Benjamin Ide Wheeler.
- Sept. 1—The Rt. Rev. Sidney Catlin Partridge, Bishop of Kansas City.  
E. Percival Lewis, Prof. of Physics.  
Music: University Glee Club.
- Sept. 15—John Galen Howard, Prof. of Architecture.  
John Graham Brooks, Lectr. in Social Economics.  
Music: University Band.

- Sept. 29—Hon. Horace Davis, Ex-President of the University.  
Music: soprano solo by Miss Mabel Clinch, '11.
- Oct. 13—David P. Barrows, Prof. of Political Science.  
Music: Mandolin Club.
- Oct. 27—Arthur Maxson Smith, Minister of the Berkeley Unitarian Church.  
Thomas H. Reed, Assoc. Prof. of Government.  
Music: tenor solo by Forrest A. Plant, '13.
- Nov. 10—President Benjamin Ide Wheeler.  
Ezra W. Decoto, '00.  
Robert W. Sibley, '03, Assoc. Prof. of Mechanical Engineering.  
John Raymond Gabbert, '07.  
Music: University Band; University Glee Club.
- Nov. 24—Music: University Chorus and Orchestra; University Orchestra;  
Women's Mandolin Club; Treble Clef Society; University  
Chorus and University Band.
- Dec. 8—Ng Poon Chew, Editor of *Chung Sai Yat Po*.

## 1912

- Jan. 19—William Shakespeare, Prof. of Singing at the Royal Academy  
of Music and at Queen's College, London.  
Adolph C. Miller, Flood Prof. of Political Economy and Com-  
merce.
- Feb. 2—Hon. J. Stitt Wilson, Mayor of Berkeley.  
Rev. Herbert A. Jump, Minister of the First Congregational  
Church of Oakland.
- Feb. 16—Dr. Wilfred T. Grenfell, of Labrador.  
Clinton Rogers Woodruff, Secretary of the National Municipal  
League.  
Music: male quartette of students.
- Mar. 1—Max Thelen, Attorney to the State Railway Commission.  
Raymond Robins, of the Men and Religion Forward Movement.  
Music: violin solo by James Hamilton Todd, Jr., '15.
- Mar. 15—Charles Mills Gayley, Prof. of the English Language and  
Literature.  
William Frederick Badè, of the Pacific Theological Seminary.  
Music: University Cadet Band.

Mar. 29—Music: University Orchestra; University Chorus; University Glee Club; Treble Clef Society; University Cadet Band.

Apr. 12—Bliss Perry, Prof. of English Literature, Harvard Univ.

R. M. Searle, of Rochester, New York.

Music: baritone solo by Robert Sherrill Maile, '13.

Apr. 26—Miss Lorraine Andrews, Chester A. Allen, Newton B. Drury, Edwin M. Einstein, Amos W. Elliott, Miss Dorothy Fish, George A. Kretsinger, Ralph C. McGee, Herman Phleger, Clare M. Torrey, Charles S. Wheeler, Jr., C. Nelson Hackett.

## APPENDIX

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STATEMENT OF EXPENDITURES FROM THE "THREE-CENT TAX" (1910-11) AND THE "UNIVERSITY FUND" (1911-12).

SALARY ROLL, TABLES OF INCOME AND EXPENDITURES, RECEIPTS AND CHARGES (REVENUE ACCOUNT) AND BALANCE SHEET.

STATISTICS COMPILED BY THE UNIVERSITY PHYSICIAN.

STATISTICAL ADDENDA COMPILED BY THE RECORDER OF THE FACULTIES.





STATEMENT OF EXPENDITURES FROM THE "THREE-CENT  
TAX" FOR THE YEAR ENDING JUNE 30, 1911

## Administration:

Salaries .....	\$72,385.41
Fellowships .....	3,200.00
Expenses .....	37,982.99
Electric Light and Power, maintenance and repairs .....	35,537.42
General repairs .....	16,951.38
Water .....	5,500.84
Publications .....	8,987.40
Equipment .....	3,170.52
Fuel .....	1,588.58
Telephone, Telegraph and Express .....	5,119.05
Postage .....	2,243.89
Auditing .....	2,011.15
Stationery .....	1,271.19
University Site, maintenance .....	17,684.65
Administrative Printing .....	9,979.77

\$223,614.24  
46,774.87

## University Library .....

## Departmental Expenditures:

Agriculture .....	\$26,229.20
Anthropology .....	7,459.88
Architecture .....	7,443.13
Astronomy (Berkeley Department) .....	8,719.03
Botany .....	14,211.55
Chemistry .....	27,850.06
Civil Engineering .....	20,068.24
Drawing .....	8,131.34
Economics .....	2,401.86
Lick Observatory .....	25,974.35
Mathematics .....	20,965.33
Mechanics .....	15,100.97
Medicine (San Francisco) .....	14,953.97
Military Science .....	2,484.01
Mining .....	16,799.84
Oriental Languages .....	1,546.16
Palaeontology .....	5,061.60
Pathology .....	8,504.72
Philosophy .....	4,180.23
Physical Culture .....	6,199.88
Physics .....	14,905.70

259,191.05

## State of California Scholarships .....

3,500.00

## Permanent Building Fund .....

177,693.39

## CASH RECEIVED

\$710,773.55

December 15, 1910 .....	\$19,862.86
January 7, 1911 .....	80,000.00
January 19, 1911 .....	371,082.49
June 5, 1911 .....	150,000.00
July 11, 1911 .....	89,828.20

\$710,773.55

STATEMENT OF EXPENDITURES FROM THE "STATE UNIVERSITY FUND" FOR THE YEAR ENDING JUNE 30, 1912

## Administration:

Salaries .....	\$84,254.67
Fellowships .....	4,000.00
Expenses .....	41,416.60
Electric Light and Power, maintenance and repairs .....	43,887.27
General repairs .....	18,879.41
Water .....	8,346.39
Publications .....	10,150.72
Equipment .....	3,586.19
Fuel .....	1,945.10
Telephone, Telegraph and Express .....	5,979.11
Postage .....	2,775.46
Auditing .....	2,052.90
Stationery .....	1,380.55
University Site, maintenance .....	16,607.65
Administrative Printing .....	11,420.01

\$256,682.01  
69,321.50

## University Library .....

## Departmental Expenditures:

Agriculture .....	\$27,140.70
Anthropology .....	9,100.37
Architecture .....	9,480.96
Astronomy (Berkeley department) .....	9,654.56
Botany .....	16,676.48
Chemistry .....	21,648.02
Civil Engineering .....	22,351.37
Drawing .....	8,439.80
Economics .....	5,303.73
Lick Observatory .....	26,544.27
Mathematics .....	24,058.84
Mechanics .....	19,406.77
Medicine (San Francisco) .....	11,247.77
Military Science .....	3,013.64
Mining .....	16,261.10
Oriental Languages .....	1,817.56
Palaeontology .....	5,599.92
Pathology .....	3,271.33

241,017.19

## State of California Scholarships .....

3,375.00

## Permanent Building Fund .....

190,131.92

\$760,527.70

## CASH RECEIVED

September, 1911 .....	\$277,546.23
November, 1911 .....	150,000.00
April, 1912 .....	332,981.47

\$760,527.70

SALARY ROLL, TABLES OF INCOME AND EXPENDITURE,  
RECEIPTS AND CHARGES (REVENUE ACCOUNT)  
AND BALANCE SHEET\*

SALARY ROLL FOR 1910-11

Salaries are for the Year from July 1, 1910, to June 30, 1911,  
unless otherwise stated.

**Administration**

Benj. I. Wheeler, President .....	\$12,000.00	
W. H. Henderson, Secretary and Land Agent .....	3,600.00	
F. A. Cutler, Attorney for the Board of Regents .....	3,600.00	
James Sutton, Recorder .....	2,200.00	
Lucy Sprague, Dean of Women and Asst. Prof. of English....	2,000.00	
I. E. Gibson, Accountant .....	2,400.00	
E. L. Wright, Clerk .....	1,000.00	
W. J. Belcher, Purchasing Agent, from July 1 to August 12 at \$2,000 per annum .....	233.32	
W. H. P. Griffiths, Secretary to the President .....	1,800.00	
F. C. Stevens, President's Stenographer .....	1,200.00	
May L. Cheney, Appointment Secretary .....	1,400.00	
Clarence H. Fortson, Assistant to the Recorder, July 1 to July 31 at \$1,000 per annum .....	83.33	
Paul Percival, Clerk in Office of Appointment Secretary .....	720.00	
C. W. Blair, Asst. Appointment Secretary, from July 1 to July 21 at \$600 per annum .....	35.00	
Albert H. Allen, Manager of the University Press .....	1,500.00	
E. A. Hugill, Superintendent of Grounds and Buildings .....	2,000.00	
Erving Markwart, Asst. Appointment Secretary, from July 21, 1910, to June 30, 1911, at \$600 per annum .....	566.66	
Lucy Stebbins, Asst. Dean of Women from January 1 to June 30, 1911, at \$1,500 per annum .....	750.00	
		\$37,088.30

**Library**

C. Rowell, Librarian .....	\$3,000.00	
Harold L. Leupp, Associate Librarian and Purchasing Agent .....	3,000.00	
F. R. Mead, Reference Librarian and Classifier .....	1,800.00	
E. B. Smith, Head of Order Department .....	1,800.00	
Erich Graff, Head of Circulation Department .....	1,300.00	
Pauline Gunthrop, Head Cataloguer .....	1,000.00	
Stella Bennett, Cataloguer, at \$900 per annum, leave of absence without pay for October .....	825.00	
Carried forward .....	\$12,725.00	\$37,088.30

\* Compiled by the Comptroller.

<i>Brought forward</i> .....	\$12,725.00	\$37,088.3
Louise W. Katz, Cataloguer .....	950.00	
Lillian Burt, Accessions Cataloguer .....	950.00	
Elizabeth M. Haskell, Clerk to the Librarian, from July 1 to March 31 at \$900 per annum .....	675.00	
Edna Goss, Asst. in Catalogue Dept., from April 15 to June 30, 1911, at \$900 per annum .....	187.50	
R. C. Woodmansee, Head of Shelf Department .....	1,200.00	
W. K. Porter, Asst. in Library, from July 1 to Sept. 30, at \$600 per annum, from October 1 to June 30, 1911, at \$480 per annum .....	510.00	
F. M. Bumstead, Head of Binding and Serials Dept. ....	1,060.00	
Helen G. Sheldon, Desk Asst., from July 1, 1910, to June 10, 1911, at \$900 per annum .....	850.00	
Wm. M. Gwyn, Desk Asst. ....	300.00	
Sarah S. Oddie, Asst. Reference Librarian, from July 1 to Nov. 30, at \$900 per annum .....	375.00	
C. B. Joeckel, Asst. Ref. Librarian, from June 1 to June 30, 1911, at \$1,500 per annum .....	125.00	
Winifred H. Bigley, Serials Dept. Asst. ....	660.00	
C. M. Jones, Reading Room Attendant .....	300.00	
Marie Tollefson, Binding Asst. ....	660.00	
Alice Lyser, Asst. in Periodical Dept., from Dec. 1, 1910, to June 30, 1911, at \$1,000 per annum .....	583.31	
Frances Mecum, Desk Asst., from July 1 to Oct. 31, at \$300 per annum; from Nov. 1 to June 30, 1911, at \$600 per annum .....	500.00	
		22,610.8

### Agriculture

E. J. Wickson, Prof. of Agriculture and Director of Experiment Station .....	\$4,000.00	
E. W. Hilgard, Emeritus Prof. of Agriculture .....	2,666.64	
Leroy Anderson, Prof. of Agricultural Practice and Supt. of University Farm Schools .....	3,000.00	
M. E. Jaffa, Prof. of Nutrition, in charge of Poultry Station, without salary.		
C. W. Woodworth, Assoc. Prof. of Entomology .....	2,700.00	
R. H. Loughridge, Prof. of Agricultural Chemistry, Emeritus .....	1,466.00	
G. W. Shaw, Assoc. Prof. of Experimental Agronomy and Agricultural Technology .....	2,400.00	
R. E. Smith, Assoc. Prof. of Plant Pathology and Supt. Southern California Pathological Laboratory and Experiment Station: salary at \$2,700 per annum, on leave without salary from August 1 to December 31.....	1,575.00	
E. W. Major, Assoc. Prof. of Animal Industries and Farm Manager, University Farm .....	2,400.00	
G. E. Colby, Asst. Prof. of Agricultural Chemistry, in charge of Laboratory of Agricultural Chemistry .....	1,800.00	
H. J. Quayle, Asst. Prof. of Entomology .....	1,900.00	
W. T. Clarke, Asst. Prof. of Horticulture and Supt. of University Extension in Agriculture .....	2,200.00	
<i>Carried forward</i> .....	\$26,107.64	\$59,699.1



## SALARY ROLL

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<i>Brought forward</i> .....	\$26,107.64	\$59,699.11
John S. Burd, Asst. Prof. of Agricultural Chemistry, in charge of Fertilizer Control .....	2,000.00	
C. M. Haring, Asst. Prof. of Veterinary Science .....	1,900.00	
E. B. Babcock, Asst. Prof. of Agricultural Education .....	1,900.00	
F. T. Bioletti, Assoc. Prof. of Viticulture .....	2,400.00	
J. H. Norton, Asst. Prof. of Agricultural Chemistry .....	1,800.00	
Wm. B. Herms, Asst. Prof. of Entomology .....	1,700.00	
H. A. Hopper, Asst. Prof. of Dairy Husbandry, July 1 to December 31, at \$1,900 per annum .....	950.00	
J. B. Neff, Conductor of Farmers' Institutes .....	1,000.00	
E. J. Lea, Instr. in Agricultural Chemistry .....	1,600.00	
R. E. Mansell, Instr. in Horticulture, in charge of Agricultural Grounds .....	1,400.00	
J. H. McCharles, Instr. in Agricultural Chemistry, from Sept. 1, 1910, to June 30, 1911, at \$1,200 per annum....	1,000.00	
E. H. Hagemann, Instr. in Dairying .....	1,600.00	
T. F. Hunt, Asst. in Plant Pathology .....	1,400.00	
E. H. Smith, Asst. in Plant Pathology .....	1,190.00	
J. O. Smith, Asst. in Plant Pathology .....	1,200.00	
A. J. Gaumnitz, Asst. in Agronomy .....	1,500.00	
P. L. McCreary, Asst. in Fertilizer Control .....	1,400.00	
E. Stover, Asst. in Agricultural Laboratory .....	1,000.00	
P. L. Hibbard, Asst. in Fertilizer Control .....	1,100.00	
J. E. Johnson, Asst. in Soil Laboratory .....	900.00	
Thas. Fuchs, Asst. in Entomological Museum .....	900.00	
T. Bearss, Foreman Kearney Exper. Station .....	900.00	
J. D. Ingham, Asst. in Sylviculture .....	1,200.00	
D. L. Bunnell, Clerk to Director .....	1,000.00	
Frederic L. Yeaw, Asst. in Plant Pathology .....	1,400.00	
L. M. Cleghorn, Principal of University Farm School and Instructor in English and Mathematics .....	1,600.00	
Osceola Farrar, Instr. in Soils and Farm Crops, from July 1, 1910, to December 31, 1910, at \$1,300 per annum .....	650.00	
Wm. T. Horne, Asst. Prof. of Plant Pathology .....	1,800.00	
E. Coit, Asst. Prof. of Pomology .....	2,000.00	
A. Madson, Asst. in Cereal Laboratory, from Aug. 13, 1910, to June 30, 1911, at \$1,000 per annum .....	886.07	
B. Lipman, Asst. Prof. of Soils .....	1,500.00	
Bonnet, Asst. in Viticulture .....	1,000.00	
M. Roberts, Instr. in Farm Practice .....	1,500.00	
Phillips, Instr. in Animal Industries (Sheep and Swine) .....	1,500.00	
D. Hawk, Instr. in Animal Industries (Dairy Cattle).....	1,400.00	
S. Brown, Instr. in Horticulture, University Farm .....	1,200.00	
M. Davis, Instr. in Dairy Industry, University Farm.....	1,200.00	
Catherine Winans, Matron of Dormitory and Manager of Dining Hall, University Farm .....	750.00	
S. Rogers, Asst. Plant Pathologist .....	1,080.00	
E. Packard, Field Asst. Imperial County Investigations .....	1,500.00	
Wil A. Stebbins, Instr. Agricultural Education .....	1,200.00	
E. Thomas, Asst. Agricultural Chemistry .....	1,000.00	
<i>Carried forward</i> .....	\$82,213.71	\$59,699.11

<i>Brought forward</i> .....	\$82,213.71	\$59,699.1
J. I. Thompson, Instr. in Animal Industry .....	1,400.00	
C. M. Titus, Instr. in Farm Mechanics, from Sept. 1, 1910, to June 30, 1911, at \$1,400 per annum .....	1,166.60	
F. C. H. Flossfeder, Field Asst. in Viticulture, from August 22, 1910, to June 30, 1911, at \$1,200 per annum .....	1,054.83	
J. C. Bridwell, Instr. in Entomolgy .....	1,500.00	
Anna Hamilton, Asst. in Entomology, from December 1, 1910, to June 30, 1911, at \$900 per annum .....	525.00	
J. S. Hunter, Field Asst. in Mosquito Studies in San Mateo County (without salary).		
Earl Morris, Field Asst. in Santa Clara County in a study of the Life History of the California Peach Root Borer and Treatment thereof (without salary).		
W. H. Volck, Field Assistant in Monterey County in the Control of Potato Worm, and in Santa Cruz County in special study of control measures for the woolly aphid (without salary).		
		87,860.1

### Anatomy

R. O. Moody, Asst. Prof. of Anatomy .....	\$2,000.00	
A. M. dal Piaz, Instr. in Anatomy .....	1,200.00	
Edw. F. Miller, Technical Asst. in Anatomy .....	1,000.00	
R. W. Harvey, Instr. in Anatomy .....	1,500.00	
Marjorie M. Johnson, Asst. in Anatomy .....	600.00	
		6,300.0

### Anthropology

A. L. Kroeber, Asst. Prof. and Secretary of Department of Anthropology and Curator of Anthropological Museum....	\$2,200.00	
T. T. Waterman, Instr. in Anthropology and Asst. Curator....	1,000.00	
N. C. Nelson, Instr. and Asst. Curator .....	1,000.00	
Mrs. E. G. Field, Asst. Secretary, from July 1, 1910, to May 31, 1911, at \$900 per annum .....	825.00	
Arthur Poyser, Preparator .....	840.00	
Arthur Warburton, Preparator .....	960.00	
E. D. Thayer, Jr., Asst. Secretary, from June 1, to June 30, at \$780 per annum .....	65.00	
		6,890.0

### Architecture

John Galen Howard, Prof. of Architecture (on leave at two- thirds salary) .....	\$2,666.64	
W. C. Hays, Asst. Prof. of Architecture (part time) .....	1,200.00	
H. W. Seawell, Instr. in Water-coloring and Pen and Ink Drawing .....	600.00	
M. Earl Cummings, Instr. in Modeling .....	200.00	
H. H. Gutterson, Instructor .....	1,000.00	
Bessy Sprague, Librarian and Clerk .....	840.00	
		6,506.6
<i>Carried forward</i> .....		\$167,255.8

Brought forward ..... \$167,255.89

### Astronomy

A. O. Leuschner, Prof. of Astronomy and Director of Students' Observatory .....	\$3,300.00
R. T. Crawford, Assoc. Prof. of Practical Astronomy .....	2,400.00
S. Einarsson, Instr. in Practical Astronomy .....	1,000.00
W. F. Meyer, Instr. in Astronomy .....	1,000.00
A. J. Champreux, Instr. in Mathematics and Astronomy, from July 1 to August 23, at \$600 per annum .....	87.10

7,787.10

### Botany

W. A. Setchell, Prof. of Botany (on leave, second half-year at two-thirds salary) .....	\$3,000.00
R. A. Harper, Assoc. Prof. of Botany, from January 1 to June 30, 1911, at \$4,000 per annum .....	2,000.00
W. L. Jepson, Asst. Prof. of Dendrology .....	2,000.00
H. M. Hall, Asst. Prof. of Economic Botany and Asst. Botanist to Agricultural Experiment Station .....	1,800.00
H. Goodspeed, Asst. in Botany .....	720.00
C. W. Shuquist, Janitor and Mech. ....	720.00
C. A. Purpus, Botanical Collector (without salary).	
T. S. Brandegee, Honorary Curator in the Herbarium (without salary).	

10,240.00

### Celtic

J. J. O'Hegarty, Reader in Irish .....	\$500.00
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### Chemistry

E. O'Neill, Prof. of Inorganic Chemistry .....	\$3,600.00
W. C. Blasdale, Asst. Prof. of Chemistry .....	2,000.00
F. G. Cottrell, Asst. Prof. Physical Chemistry .....	2,000.00
W. C. Morgan, Asst. Prof. of Chemistry .....	2,000.00
H. C. Biddle, Asst. Prof. of Chemistry .....	2,000.00
Edward Booth, Asst. Prof. of Chemistry .....	1,500.00
Chas. Gilman, Asst. in Chemistry .....	1,100.00
Edna Pracy, Asst. in Chemistry .....	600.00
H. V. Welch, Asst. in Chemistry .....	900.00
J. A. Madsen, Laboratory Mechanic .....	1,100.00
W. C. Riddell, Asst. in Chemistry .....	900.00
H. M. Severance, Asst. in Chemistry .....	600.00
J. T. Winkler, Asst. in Chemistry .....	500.00
D. L. Brauer, Asst. in Chemistry .....	400.00
V. R. Edwards, Asst. in Chemistry .....	400.00
E. S. Alderman, Asst. in Chemistry .....	400.00
Sarah F. Rising, widow of W. B. Rising, deceased .....	1,035.00

21,035.00

### Civil Engineering

Chas. Derleth, Jr., Prof. of Civil Engineering .....	\$3,600.00
Frank Soulé, Prof. Emeritus of Civil Engineering .....	2,200.00
Chas. Gilman Hyde, Prof. of Sanitary Engineering .....	3,000.00
C. H. Tibbetts, Asst. Prof. of Civil Engineering .....	1,800.00
T. B. Sears, Assoc. Prof. of Railroad Engineering .....	2,400.00

Carried forward ..... \$13,000.00 \$206,817.99

<i>Brought forward</i> .....	\$13,000.00	\$206,817.99
A. C. Alvarez, Instr. in Civil Engineering .....	1,200.00	
H. J. Kesner, Instr. in Civil Engineering .....	1,200.00	
Val. Arntzen, Expert Mechanic in Civil Engineering Laboratory .....	1,800.00	
Nettie Meek, Clerk .....	1,000.00	
A. J. Eddy, Instr. in Civil Engineering .....	1,000.00	
H. S. Griswold, Instr. in Civil Engineering .....	1,200.00	
H. H. Harder, Asst. in Testing Laboratory .....	780.00	
		21,180.00

### Dental Department

Dr. J. G. Sharp, Professor of the Principles and Practice of Surgery, and Dean .....	\$1,000.00	
Dr. G. S. Millberry, Superintendent and Professor of Chemistry and Metallurgy .....	3,000.00	
S. W. Hussey, Demonstrator in Clinical Dentistry .....	1,200.00	
Dr. H. B. Carey, Instr. in Anatomy and Histology, Materia Medica and Therapeutics .....	600.00	
Dr. Edward H. Mauk, Instr. in Technics .....	800.00	
Dr. Elmer E. Evans, Asst. Instructor .....	200.00	
Dr. W. F. Sharp, Professor of Prosthetic Dentistry .....	500.00	
Dr. J. D. Hodgen, Professor of Operative Dentistry .....	500.00	
Dr. J. B. Tufts, Professor of Dental Pathology and Therapeutics and Orthodontia .....	500.00	
Dr. G. L. Bean, Professor of Dental Porcelain .....	500.00	
Dr. H. T. Moore, Lecturer on Surgery .....	100.00	
Dr. S. W. Hall, Instr. in Extracting .....	100.00	
Dr. Louis Graham, Asst. in Operative Dentistry .....	100.00	
Dr. R. A. Day, Instr. in Orthodontia Technic .....	100.00	
Dr. A. H. Suggett, Lectr. and Clinical Instr. in Orthodontia .....	150.00	
Dr. S. C. Davis, Asst. in Dental Porcelain, without salary.		
Dr. F. B. Kenward, Asst. in Dental Porcelain .....	100.00	
Dr. J. E. Gurley, Laboratory Asst. in Chemistry .....	150.00	
Dr. M. T. Rhodes, Demonstrator in Clinical Dentistry .....	100.00	
Dr. O. P. Roller, Special Instr. in Dental Porcelain, without salary.		
Dr. S. S. Maxwell, Assoc. Professor in Physiology .....	350.00	
A. W. Lee, Instr. in Bacteriology and Pathology .....	500.00	
Mr. Louis Bartlett, Lecturer in Dental Jurisprudence .....	50.00	
Dr. R. E. Keys, Librarian .....	300.00	
Dr. Malcolm Goddard, Instr. in Comparative Anatomy, without salary.		
Dr. P. T. Carrington, Curator of the Museum, without salary.		

10,900.00

### Drawing

H. Kower, Assoc. Prof. of Drawing .....	\$2,700.00	
W. J. Wythe, Asst. Prof. in Drawing .....	1,600.00	
C. Chapel Judson, Asst. Prof. in Drawing .....	1,600.00	
H. B. Monges, Instr. in Drawing .....	1,200.00	
K. E. Neuhaus, Instr. in Drawing .....	900.00	

8,000.00

*Carried forward* ..... \$246,897.99

# SALARY ROLL

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*Brought forward* ..... \$246,897.99

## Economics

A. C. Miller, Flood Prof. of Political Economy and Commerce .....	\$4,000.00	
C. C. Plehn, Prof. of Finance on the Flood Foundation .....	3,300.00	
H. R. Hatfield, Prof. of Accounting on the Flood Foundation, and Secretary of College of Commerce .....	3,300.00	
W. C. Mitchell, Prof. of Political Economy on the Flood Foundation (on leave at two-thirds salary) .....	2,000.00	
Lincoln Hutchinson, Asst. Prof. of Commerce on the Flood Foundation, and Advisor .....	2,700.00	
Jessica B. Peixotto, Asst. Prof. of Sociology (on leave for first half-year at two-thirds salary) .....	1,533.24	
Stuart Daggett, Asst. Prof. of Railway Economics on the Flood Foundation .....	2,000.00	
W. C. Fankhauser, Flood Fellow in Commerce .....	400.00	
A. R. Williams, Flood Fellow in Commerce .....	400.00	
J. S. Scotford, Special Lecturer on Advertising (without salary).		
Solomon Blum, Asst. in Economics .....	700.00	
Donald English, Asst. in Economics, from July 1 to Sept. 15, at \$500 per annum .....	104.15	
		<hr/> 20,437.39

## Education

A. F. Lange, Prof. of the Theory and Practice of Education .....	\$4,000.00	
E. E. Brown, Hon. Prof. of Education (without salary).		
D. P. Barrows, Prof. of Education .....	3,000.00	
W. S. Thomas, Asst. Prof. of Education and Examiner of Schools .....	2,200.00	
C. E. Rugh, Assoc. Prof. of Education .....	2,700.00	
R. G. Boone, Lecturer in Education .....	3,000.00	
John Swett, Honorary Lecturer (without salary).		
E. O. James, Fellow in Education .....	600.00	
		<hr/> 15,500.00

## Electric Light and Power

Ira E. Currier, Engineer .....	\$1,200.00	
W. H. Lozier, Electrician .....	1,200.00	
A. D. White, Storekeeper and Machinist .....	1,200.00	
		<hr/> 3,600.00

## English

C. M. Gayley, Prof. of the English Language and Literature .....	\$4,000.00	
C. B. Bradley, Prof. of Rhetoric .....	2,700.00	
C. W. Wells, Assoc. Prof. of English Composition (on leave at two-thirds salary; salary to be \$2,700 from July 1, 1911) .....	1,600.00	
Wm. D. Armes, Assoc. Prof. of American Literature .....	2,000.00	
T. F. Sanford, Asst. Prof. of English Literature .....	1,700.00	
M. C. Flaherty, Assoc. Prof. of Forensics .....	2,400.00	
W. M. Hart, Assoc. Prof. of English Philology .....	2,400.00	
		<hr/>
<i>Carried forward</i> .....	\$16,800.00	\$286,435.38



<i>Brought forward</i> .....	\$16,800.00	\$286,435.38
B. P. Kurtz, Asst. Prof. of English .....	1,800.00	
G. A. Smithson, Instr. in English Philology .....	1,100.00	
C. D. von Neumayer, Instr. in Public Speaking .....	1,500.00	
F. T. Blanchard, Instr. in English .....	1,100.00	
H. E. Cory, Instr. in English .....	1,100.00	
G. R. MacMinn, Instr. in English .....	1,000.00	
L. Bacon, Instr. in English .....	1,000.00	
M. E. Harrison, Teaching Fellow in English .....	600.00	
		26,000.00

### Geography

George Davidson, Emeritus Prof. of Geography .....	700.00	
R. S. Holway, Asst. Prof. of Physical Geography .....	2,000.00	
Earle G. Linsley, Instr. in Geography .....	1,200.00	
		3,900.00

### Geology and Mineralogy

A. C. Lawson, Prof. of Mineralogy and Geology .....	\$4,000.00	
G. D. Louderback, Assoc. Prof. of Geology .....	2,200.00	
A. S. Eakle, Asst. Prof. of Mineralogy .....	1,800.00	
H. O. Wood, Instr. in Mineralogy and Geology .....	1,300.00	
E. E. Behr, Asst. in Mineralogy and Geology .....	600.00	
J. A. Sampson, Asst. in Mineralogy and Geology .....	600.00	
R. M. Rowe, Asst. in Mineralogy and Geology .....	900.00	
		11,400.00

### German

H. K. Schilling, Prof. of German Language and Literature, leave of absence on full pay from February 23 to June 30, 1911 .....	\$4,000.00	
A. Putzker, Emeritus Prof. of German Literature .....	2,000.00	
J. H. Senger, Assoc. Prof. of German .....	2,400.00	
L. J. Demeter, Asst. Prof. of German .....	1,700.00	
Clarence Paschall, Asst. Prof. of German .....	1,600.00	
Fritz Winther, Instr. in German (on leave first half-year, without salary).		
R. Pinger, Instr. in German .....	1,400.00	
F. A. Wyneken, Asst. in German .....	500.00	
Sophie Wolff, Asst. in German .....	500.00	
F. Schraidt, Asst. in German .....	500.00	
Paul Boehneke, Asst. in German, from January 1 to June 30, at \$900 per annum .....	450.00	
		15,050.00

### Greek

E. B. Clapp, Prof. of the Greek Language and Literature....	\$4,000.00	
Isaac Flagg, Prof. Emeritus of Greek .....	1,600.00	
J. T. Allen, Assoc. Prof. of Greek .....	2,400.00	
I. M. Linforth, Asst. Prof. of Greek .....	1,800.00	
		9,800.00

*Carried forward* ..... \$352,585.38

Brought forward ..... \$352,585.38

**History**

H. Morse Stephens, Prof. of History .....	\$5,000.00	
T. R. Bacon, Prof. of Modern European History .....	3,000.00	
R. F. Scholz, Asst. Prof. of Ancient History .....	1,800.00	
J. N. Bowman, Asst. Prof. of Mediaeval History .....	1,900.00	
E. I. McCormac, Asst. Prof. of American History .....	1,600.00	
Don E. Smith, Asst. Prof. of History and Geography and Secretary of Dept. of History .....	1,800.00	
L. P. Briggs, Teaching Fellow in History .....	600.00	
C. L. Goodwin, Teaching Fellow in History .....	600.00	
C. E. Chapman, Teaching Fellow in History .....	600.00	
A. von Hemert-Engert, Teaching Fellow in History .....	600.00	
		17,500.00

**Hygiene**

G. F. Reinhardt, Prof. of Hygiene and University Physician .....	\$3,600.00	
C. R. Greenleaf, Hon. Prof. of Military and Public Hygiene (without salary).		
E. S. Bancroft, Lecturer on Hygiene and Medical Examiner .....	1,800.00	
E. B. Hoag, Lecturer in Public Hygiene .....	1,200.00	
W. A. Sawyer, Medical Examiner and Director of State Hygienic Laboratory .....	1,500.00	
Margaret Henderson, Instr. in Bacteriology .....	1,200.00	
C. B. McGlumphy, Asst. in State Hygienic Laboratory (salary is \$1,500, paid by the State).		
Ethel Sherman, Supt. of Infirmary .....	1,200.00	
J. N. Force, Lecturer in Hygiene (without salary).		
Florence Sylvester, Lecturer in Hygiene (without salary). .....		10,500.00

**Irrigation**

B. A. Etcheverry, Assoc. Prof. of Irrigation Engineering....	\$2,400.00	
Albert E. Chandler, Asst. Prof. of the Institutions of Irriga- tion .....	1,600.00	
		4,000.00

**Jurisprudence**

Wm. Carey Jones, Prof. of Jurisprudence .....	\$4,000.00	
Curtis H. Lindley, Hon. Prof. of Law of Mines and Water (without salary).		
Orrin K. McMurray, Prof. of Law .....	3,000.00	
G. H. Boke, Prof. of Law (on leave two-thirds salary) .....	1,800.00	
A. M. Kidd, Asst. Prof. of Law .....	2,000.00	
M. C. Lynch, Instr. in Law .....	1,200.00	
C. G. White, Lecturer in Law .....	500.00	
Max Thelen, Lecturer in Law .....	500.00	
Lester H. Jacobs, Lecturer on Law of Insurance .....	1,000.00	
Farnham P. Griffiths, Lecturer in Law .....	500.00	
W. E. Colby, Lecturer on the Law of Mines .....	360.00	
A. G. Tasheira, Lecturer in Law .....	350.00	
J. P. Chamberlain, Lecturer in Law (on leave without salary).		
Warren Olney, Jr., Lecturer in Law (on leave without salary). .....		15,210.00

Carried forward ..... \$399,795.38

*Brought forward* ..... \$399,795.38

### Latin

W. A. Merrill, Prof. of the Latin Language and Literature .....	\$4,000.00
L. J. Richardson, Assoc. Prof. of Latin .....	2,400.00
Clifton Price, Asst. Prof. of Latin .....	1,700.00
H. C. Nutting, Asst. Prof. of Latin .....	1,900.00
O. M. Washburn, Asst. Prof. of Archaeology .....	1,800.00
Torsten Petersson, Instr. in Latin .....	1,400.00
M. E. Deutsch, Instr. in Latin .....	1,200.00
Sereno B. Clark, Instr. in Latin .....	1,500.00

15,900.00

### Lick Observatory

W. W. Campbell, Director and Astronomer .....	\$5,000.00
R. H. Tucker, Astronomer (on leave without salary).	
Heber D. Curtis, Astronomer .....	2,400.00
R. G. Aitken, Astronomer .....	2,700.00
W. H. Wright, Astronomer .....	2,400.00
Kevin Burns, Assistant .....	1,320.00
H. C. Wilson, Assistant .....	900.00
Paul W. Merrill, Fellow .....	600.00
R. Young, Fellow .....	600.00
Carl C. Kiess, Fellow .....	600.00
Violet E. Standen, Secretary .....	1,000.00
J. Macdonald, Engineer, from July 1 to Sept. 30, at \$1,200 per annum .....	300.00
J. E. Hoover, Carpenter .....	1,200.00
H. Bachman, Instrument-maker .....	1,200.00
W. N. Waterhouse, Janitor .....	720.00
J. H. Odlin, Laborer .....	960.00
Frank Knobloch, Laborer .....	660.00

### Carnegie Fund

Miss A. M. Hobe, Assistant .....	1,000.00
C. P. Olivier, Assistant, from July 1 to December 31, 1910, at \$900 per annum .....	450.00

24,010.00

### Mathematics

M. W. Haskell, Prof. of Mathematics .....	\$3,300.00
Geo. C. Edwards, Prof. of Mathematics .....	3,000.00
C. A. Noble, Asst. Prof. of Mathematics and Asst. Examiner	2,000.00
D. N. Lehmer, Assoc. Prof. of Mathematics .....	2,400.00
A. W. Whitney, Asst. Prof. of Mathematics and Insurance Methods (on leave without salary).	
T. M. Putnam, Asst. Prof. of Mathematics .....	1,800.00
J. H. McDonald, Asst. Prof. of Mathematics .....	1,600.00
Chas. Kuschke, Instr. in Mathematics .....	1,100.00
B. A. Bernstein, Instr. in Mathematics .....	1,100.00
B. M. Woods, Instr. in Mathematics .....	1,000.00
A. H. Mowbray, Instr. in Insurance .....	1,500.00
Adelaide Smith, Asst. in Mathematics .....	600.00

*Carried forward* ..... \$19,400.00 \$439,705.38

*Brought forward* ..... \$19,400.00    \$439,705.38

H. W. Stager, Asst. in Mathematics, from July 1 to August 31, at \$600 per annum .....	100.00	
P. W. Stoner, Asst. in Mathematics .....	600.00	
W. A. Newlin, Asst. in Mathematics .....	600.00	
H. N. Wright, Asst. in Mathematics .....	600.00	
Mrs. Martha S. D. Stringham, widow of Prof. Irving Stringham .....	960.00	
		22,260.00

### Mechanics

C. L. Cory, John W. Mackay, Jr., Prof. of Electrical Engineering and Director of Electric Light and Power Plant .....	\$4,000.00	
F. G. Hesse, Emeritus Prof. of Hydraulics, from July 1, 1910, to January 27, 1911, at \$2,000 per annum .....	1,311.78	
H. W. Reynolds, Assoc. Prof. Mechanical Engineering .....	2,100.00	
J. N. LeConte, Asst. Prof. of Mechanical Engineering .....	2,000.00	
G. C. Noble, Asst. Prof. of Electrical Engineering .....	1,600.00	
C. F. Gilcrest, Instr. in Electrical Engineering .....	1,100.00	
W. M. Griffiths, Instr. in Mechanical Engineering .....	1,000.00	
G. E. Cox, Asst. in Mechanics and Foreman of Woodwork....	1,500.00	
James George, Asst. in Mechanics and Foreman in Ironwork .....	1,350.00	
G. M. Thomas, Mackay Fellow .....	600.00	
		16,561.78

### Medicine

Dr. A. A. D'Ancona, Dean .....	2,400.00
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### Military Science and Tactics

E. M. Lewis, Prof. of Military Science, etc. ....	800.00
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### Mining

S. B. Christy, Prof. of Mining and Metallurgy .....	\$4,000.00	
E. B. Durham, Assoc. Prof. of Mining .....	2,400.00	
E. A. Hersam, Assoc. Prof. of Metallurgy .....	2,400.00	
W. S. Morley, Asst. Prof. of Metallurgy .....	1,800.00	
George Spencer, Mechanician .....	1,200.00	
E. P. Willoughby, Helper .....	1,000.00	
W. A. McKee, Clerk .....	900.00	
J. L. Talbot, Storekeeper and Helper .....	900.00	
H. N. Herrick, Asst. in Mining and Mechanical Draughtsman .....	1,400.00	
		16,000.00

### Music

J. F. Wollé, Prof. of Music .....	3,000.00
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### Oriental Languages

John Fryer, Agassiz Prof. of Oriental Languages and Literatures .....	\$4,000.00	
Y. S. Kuno, Asst. in Japanese .....	720.00	
		4,720.00

*Carried forward* ..... \$505,447.16

Brought forward ..... \$505,447.16

### Palaeontology

John O. Merriam, Assoc. Prof. of Palaeontology and Historical Geology .....	\$2,700.00
Bruce Clark, Asst. in Palaeontology, from July 1 to July 31, at \$1,000 per annum .....	83.33
L. H. Miller, Instr. in Palaeontology, from July 1 to December 31, 1910, at \$1,200 per annum .....	600.00
B. L. Clark, Instr. in Palaeontology, from January 1 to June 30, 1911, at \$1,200 per annum .....	600.00
J. Guintyllo, Asst. in Palaeontology, from Sept. 19, 1910, to June 30, 1911, at \$1,100 .....	861.60

4,844.93

### Pathology

F. P. Gay, Prof. of Pathology .....	\$4,000.00
G. Y. Rusk, Asst. Prof. of Pathology, from Oct. 1, 1910, to June 30, 1911, at \$1,800 per annum .....	1,350.00
A. W. Lee, Instr. in Pathology .....	1,200.00

6,550.00

### Philosophy

G. H. Howison, Prof. of Philosophy, Emeritus .....	\$3,000.00
G. M. Stratton, Prof. of Psychology .....	4,000.00
C. H. Rieber, Assoc. Prof. of Logic .....	2,700.00
H. A. Overstreet, Assoc. Prof. of Philosophy, from July 1 to Dec. 31, 1910, at \$2,700 per annum .....	1,350.00
Geo. P. Adams, Asst. Prof. of Philosophy .....	1,800.00
Warner Brown, Instr. in Psychology .....	1,400.00
F. C. Becker, Instr. in Philosophy .....	1,200.00
J. S. Jackson, Asst. in Psychology .....	500.00

15,950.00

### Physical Culture

W. E. Magee, Prof. of Physical Culture .....	\$2,000.00
V. V. Ligda, Asst. Prof. of Physical Culture .....	1,300.00
Genevra E. Magee, Asst. in Physical Culture .....	900.00
Louise A. Place, Asst. in Physical Culture .....	720.00
R. T. Scott, Asst. in Physical Culture .....	480.00

5,400.00

### Physics

F. Slate, Prof. of Physics .....	\$4,000.00
E. P. Lewis, Prof. of Physics (on leave at two-thirds salary) .....	2,000.00
W. J. Raymond, Assoc. Prof. of Physics .....	2,200.00
R. S. Minor, Assoc. Prof. of Physics .....	2,500.00
E. E. Hall, Assoc. Prof. of Physics .....	2,400.00
T. S. Elston, Instr. of Physics .....	1,400.00
R. B. Abbott, Instr. in Physics .....	1,200.00
W. E. Stamper, Mechanician .....	1,800.00
G. O. Liebermann, Helper in Laboratory .....	900.00

Carried forward ..... \$18,400.00 \$538,192.09



## SALARY ROLL

387

Brought forward ..... \$18,400.00 \$538,192.09

Robt. Lloyd, Lab. Helper, August 29 to September 29 at \$600 per annum, Sept. 29 to June 30, 1911, at \$900 per annum .....	730.00
H. N. Young, Asst. in Physics .....	500.00
T. A. Davidson, Asst. in Physics .....	500.00
G. I. Johnstone, Asst. in Physics .....	500.00
H. J. Rohde, Asst. in Physics .....	500.00
J. H. Bardsley, Asst. in Physics .....	500.00
V. Petrovsky, Asst. in Physics .....	500.00
L. Rehfuess, Asst. in Physics .....	500.00
J. C. Corbett, Asst. in Physics .....	500.00
W. P. Roop, Whiting Fellow .....	600.00
H. W. Edwards, Whiting Fellow .....	600.00

24,330.00

## Physiology

S. S. Maxwell, Assoc. Prof. of Physiology .....	\$2,400.00
T. B. Robertson, Assoc. Prof. of Physiological Chemistry....	2,400.00
T. C. Burnett, Instr. in Physiology .....	1,200.00
A. R. Moore, Assistant .....	1,200.00
L. R. Beauchamp, Technical Asst. from Aug. 1, 1910, to June 30, 1911, at \$720 per annum.....	600.00
W. F. Allen, Collector and Asst., from July 1 to August 31, at \$1,000 per annum .....	166.66

7,966.66

## Political Science

Bernard Moses, Prof. of History and Political Science, leave of absence on full pay from July 1 to November 1 .....	\$4,000.00
Thomas H. Reed, Asst. Prof. in Political Science, from July 1 to December 31, at \$1,800 per annum, on leave without pay for second half-year .....	900.00
F. L. Talbert, Teaching Fellow .....	600.00

5,500.00

## Printing Office

J. W. Flinn, Superintendent .....	2,200.00
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## Romanic Languages

Lucien Foulet, Prof. French Language and Literature .....	\$4,000.00
R. Schevill, Prof. of Spanish .....	3,000.00
S. A. Chambers, Asst. Prof. of French .....	1,900.00
J. T. Clark, Asst. Prof. of Romanic Philology .....	1,900.00
E. P. Dargan, Asst. Prof. of French .....	2,000.00
E. E. Fauchaux, Asst. Prof. of French Literature, on leave for second half-year at two-thirds salary .....	1,416.60
J. A. Child, Asst. Prof. in Italian .....	1,600.00
J. H. S. Howard, Instr. in French .....	1,400.00
Carlos Bransby, Instr. in Spanish .....	1,400.00
E. B. Lamare, Instr. in French .....	1,000.00
Alfred Solomon, Instr. in French .....	1,200.00
Mrs. J. H. Greenleaf, Instr. in French .....	1,100.00

21,916.60

Carried forward ..... \$600,105.35

Brought forward ..... \$600,105.35

### Sanskrit

A. W. Ryder, Asst. Prof. of Sanskrit ..... 1,700.00

### Semitic Languages

William Popper, Asst. Prof. of Semitic Languages ..... 2,000.00

### Slavic Languages

George R. Noyes, Asst. Prof. of Slavic Languages ..... 2,000.00

### University Extension

J. D. Fletcher, Secretary for University Extension (without salary).

Don E. Smith, Lecturer and Acting Director (without salary).

F. J. Teggart, Lecturer (without salary).

B. P. Kurtz, Lecturer (without salary).

### Vertebrate Zoology

Joseph Grinnell, Director of the California Museum of Vertebrate Zoology.

Edmund Heller, Curator of Mammals.

Harry S. Swarth, Asst. Curator of Birds.

Walter P. Taylor, Asst. Curator of Mammals.

(Salaries for the above are paid direct from Miss Alexander's provision for the Museum).

### Wilmerding School

G. A. Merrill, Director ..... \$2,100.00

Geo. F. Wood, Vice-Prin. and Instr. in Plumbing ..... 2,100.00

R. M. Grant, Instr. in Carpentry ..... 1,500.00

L. H. Werson, Instr. in Bricklaying ..... 1,500.00

J. E. Maybeck, Instr. in Cabinet Making ..... 1,500.00

Frank L. Dodge, Instr. in Electrical Work ..... 1,500.00

Julia M. Edwards, Instr. in English Branches ..... 1,500.00

Gwynn Page Anderson, Instr. in Mathematics ..... 1,200.00

J. McHenry, Instr. in Mechanical and Architectural Drawing ..... 1,500.00

J. C. Christensen, Instr. in Science, salary at \$1,500 per annum (on leave without pay from January 5 to June 30) ..... 766.13

Mary E. Wilson, Instr. in Science at \$1,500 per annum from January 5 to June 30 ..... 733.87

Jessie N. Bell, Instr. in Industrial Art ..... 1,200.00

Alice E. Crowe, Office Assistant, from July 1 to September 30, 1910 at \$960 per annum ..... 240.00

Gladys M. Elliott, Office Asst., from September 20 to June 30, at \$600 per annum ..... 466.66

J. E. Lozier, General Shop Assistant ..... 1,200.00

19,006.66

Carried forward ..... \$624,812.01

Brought forward ..... \$624,812.01

### Zoology

W. E. Ritter, Prof. of Zoology .....	\$3,000.00
C. A. Kofoed, Prof. of Zoology .....	2,700.00
H. B. Torrey, Assoc. Prof. of Zoology .....	2,400.00
J. A. Long, Instr. in Zoology .....	1,300.00
J. F. Daniel, Instr. in Zoology .....	1,300.00
R. G. Sharp, Asst. in Zoology.....	600.00
H. Bates, Asst. in Zoology .....	600.00
W. H. Davisson, Helper .....	700.00
Myrtle Johnson, Asst. Zoology, January 1 to June 30, at \$500 per annum .....	250.00
Elizabeth Heald, Agassiz Research Assistant .....	600.00
Effie J. Rigden, Agassiz Research Assistant, from July 1 to August 23, at \$1,000 per annum .....	147.22

13,597.22

### SCHOLARSHIPS AND FELLOWSHIPS

Phoebe Hearst .....	\$2,400.00
State of California .....	3,500.00
Levi Strauss .....	3,500.00
Cornelius B. Houghton .....	150.00
LeConte Memorial .....	500.00
Goewey .....	250.00
Pixley .....	200.00
Paget .....	150.00
Crystal Harford .....	125.00
Albert Sydney Johnston .....	175.00
Martin B. Kellogg .....	600.00
Lincoln .....	240.00
Sheffield Sanborn .....	750.00
Willard D. Thompson .....	3,000.00
University Fellowships .....	3,200.00
University Fellowships in Academy of Pacific Coast History, donated by Native Sons of the Golden West .....	250.00

\$18,990.00

\$657,399.23

## SALARY ROLL FOR 1911-12

Salaries are for the Year from July 1, 1911, to June 30, 1912,  
unless otherwise stated.

## Administration

Benjamin I. Wheeler, President.....	\$12,000.00
Ralph P. Merritt, Comptroller, from December 1, 1911, to June 30, 1912, at \$5,000 per annum.....	2,916.62
V. H. Henderson, Secretary and Land Agent.....	3,600.00
Warren Olney, Jr., Attorney for the Board of Regents.....	3,600.00
James Sutton, Recorder .....	2,400.00
Lucy Sprague, Dean of Women and Asst. Prof. of English (on leave without pay from October 15, 1911, to January 15, 1912) .....	1,500.00
Lucy Stebbins, Assistant to Dean of Women.....	1,500.00
H. E. Gibson, Accountant .....	2,600.00
H. L. Wright, Clerk.....	1,060.00
N. Hovey, Purchasing Agent.....	2,000.00
Farnham P. Griffiths, Secretary to the President, \$2,000, and Lecturer in Law, \$500.....	2,500.00
F. C. Stevens, President's Stenographer.....	1,320.00
May L. Cheney, Appointment Secretary.....	1,500.00
Maud Percival, Clerk in Office of Appointment Secretary from July 1, 1911, to December 31, 1911, at \$780 per annum .....	390.00
Vera Percival, Clerk in Office of Appointment Secretary from January 1, 1912, to June 30, 1912, at \$900 per annum .....	450.00
Irving Markwart, Assistant Appointment Secretary from July 1, 1911, to February 29, 1912, at \$600 per annum .....	400.00
Albert H. Allen, Manager of the University Press.....	1,500.00
E. A. Hugill, Superintendent of Grounds and Buildings....	2,000.00

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\$43,236.62

## Library

J. C. Rowell, Librarian.....	\$3,000.00
Harold L. Leupp, Associate Librarian.....	3,000.00
H. Ralph Mead, Reference Librarian.....	1,600.00
A. B. Smith, Head of Accessions Department from July 1, 1911, to August 31, 1911, at \$1,600 per annum.....	266.66
S. B. Mitchell, Head of Accessions Department from Sep- tember 1, 1911, to June 30, 1912, at \$1,600 per annum .....	1,333.30
Carleton B. Joeckel, Assistant Reference Librarian.....	1,500.00
Pauline Gunthorp, Head Cataloguer.....	1,200.00
F. M. Bumstead, Inspector.....	1,200.00
Myrtle Roberts, Librarian's Secretary from August 1, 1911, to June 30, 1912, at \$840 per annum.....	770.00
Ulrich Graff, Senior Assistant .....	1,300.00
Edith M. Coulter, Senior Assistant.....	1,200.00
Ella K. Walker, Senior Assistant from August 1, 1911, to	

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*Carried forward* ..... \$16,369.96      \$43,236.62

# SALARY ROLL

391

*Brought forward* ..... \$16,369.96      \$43,236.62

June 30, 1912, at \$1,200 per annum.....	1,100.00
Edna L. Goss, Senior Assistant.....	1,000.00
Alice I. Lyser, Senior Assistant.....	1,000.00
Lillian Burt, Senior Assistant.....	950.00
Louise W. Katz, Senior Assistant.....	950.00
Stella Bennett, Senior Assistant.....	900.00
Sarah Oddie, Senior Assistant from September 11, 1911, to June 30, 1912, at \$1,080 per annum.....	867.00
Marie Tollefson, Junior Assistant.....	660.00
W. K. Porter, Junior Assistant.....	600.00
Frances Mecum, Junior Assistant.....	600.00
J. A. Dean, Junior Assistant from August 1 to August 15 at \$720 per annum, and August 15, 1911, to June 30, 1912, at \$900 per annum.....	817.50
Coral Wolfe, Junior Assistant from August 1, 1911, to June 30, 1912, at \$600 per annum.....	550.00
Wm. M. Gwynn, Junior Assistant.....	350.00
T. G. Clark, Messenger.....	900.00
C. M. Jones, Reading-room Attendant .....	400.00

28,014.46

## Agriculture

E. J. Wickson, Professor of Agriculture and Director of Experiment Station .....	\$4,000.00
E. W. Hilgard, Emeritus Professor of Agriculture.....	2,666.00
Leroy Anderson, Professor of Agricultural Practice and Superintendent of University Farm Schools .....	3,000.00
M. E. Jaffa, Professor of Nutrition, and in charge of Poultry Station, without salary.....	
C. W. Woodworth, Professor of Economic Entomology.....	2,700.00
R. H. Loughridge, Professor of Agricultural Chemistry Emeritus .....	1,466.00
G. W. Shaw, Associate Professor of Experimental Agronomy and Agricultural Technology.....	2,700.00
R. E. Smith, Professor of Plant Pathology and Superin- tendent Southern California Pathological Laboratory and Experiment Station .....	2,800.00
E. W. Major, Associate Professor of Animal Industries (on leave at two-thirds salary).....	1,600.00
G. E. Colby, Assistant Professor of Agricultural Chemistry, in charge of Laboratory of Agricultural Chemistry.....	2,000.00
H. J. Quayle, Assistant Professor of Entomology .....	2,000.00
W. T. Clarke, Associate Professor of Horticulture and Superintendent of University Extension in Agriculture....	2,400.00
John S. Burd, Associate Professor of Agricultural Chemistry, in charge of Fertilizer Control.....	2,400.00
C. M. Haring, Assistant Professor of Veterinary Science (on leave for second half year at two-thirds salary).....	1,833.30
E. B. Babcock, Assistant Professor of Agricultural Education	2,000.00
F. T. Bioletti, Associate Professor of Viticulture.....	2,600.00
J. H. Norton, Assistant Professor of Agricultural Chemistry from July 1, 1911, to January 31, 1912, at \$2,000 per annum .....	1,166.62

*Carried forward* ..... \$37,331.92      \$71,251.08



<i>Brought forward</i> .....	\$37,331.92	\$71,251.08
Wm. B. Herms, Assistant Professor of Entomology.....	1,800.00	
H. A. Ruehe, Instructor in Dairy Husbandry.....	1,200.00	
J. B. Neff, Conductor of Farmers' Institutes.....	1,000.00	
E. J. Lea, Assistant Professor of Agricultural Chemistry.....	1,800.00	
R. E. Mansell, Instructor in Horticulture, in charge of Agricultural Grounds from July 1, 1911, to August 31, 1911, at \$1,500 per annum.....	250.00	
C. H. McCharles, Instructor in Agricultural Chemistry.....	1,300.00	
E. H. Hagemann, Instructor in Dairying.....	1,600.00	
T. F. Hunt, Plant Pathologist.....	1,500.00	
E. H. Smith, Instructor in Plant Pathology.....	1,200.00	
C. O. Smith, Instructor in Plant Pathology.....	1,300.00	
A. J. Gaumnitz, Assistant Agronomist.....	1,500.00	
P. L. McCreary, Chemist in Fertilizer Control.....	1,600.00	
M. E. Stover, Assistant in Agricultural Laboratory.....	1,100.00	
P. L. Hibbard, Instructor in Agricultural Chemistry.....	1,400.00	
F. E. Johnson, Instructor in Soils from July 1, 1911, to February 12, 1912, at \$1,200 per annum.....	739.97	
M. E. Holter, Instructor in Soils from February 13, 1912, to June 30, 1912, at \$1,200 per annum.....	461.03	
G. A. Coleman, Curator in Entomological Museum.....	900.00	
N. D. Ingham, Silviculturist at Santa Monica from July 1, 1911, to March 31, 1912, at \$1,200 per annum.....	900.00	
D. L. Bunnell, Secretary to Director.....	1,100.00	
Fred L. Yeaw, Plant Pathologist from July 1, 1911, to August 31, 1911, at \$1,500 per annum.....	250.00	
A. M. Cleghorn, Principal of University Farm School and Instructor in English and History.....	1,800.00	
Fred H. Bolster, Instructor in Botany and Horticulture.....	1,400.00	
Wm. T. Horne, Assistant Professor of Plant Pathology.....	2,000.00	
J. E. Coit, Associate Professor of Pomology.....	2,400.00	
B. A. Madson, Instructor in Experimental Agronomy.....	1,200.00	
C. B. Lipman, Assistant Professor of Soils.....	2,000.00	
L. Bonnet, Instructor in Viticulture.....	1,100.00	
R. M. Roberts, Manager of University Farm.....	1,800.00	
H. Phillips, Instructor in Animal Industries (Sheep and Swine) .....	1,600.00	
B. S. Brown, Instructor in Horticulture, University Farm..	1,400.00	
L. M. Davis, Instructor in Dairy Industry, University Farm	1,500.00	
S. S. Rogers, Plant Pathologist.....	1,400.00	
W. E. Packard, Experimental Agronomist, in charge of Imperial Valley Station .....	1,800.00	
Cyril A. Stebbins, Instructor Agricultural Education.....	1,300.00	
E. E. Thomas, Assistant Chemist in Southern California Laboratory .....	1,200.00	
J. I. Thompson, Instructor in Animal Industry.....	1,500.00	
C. M. Titus, Instructor in Mathematics and Surveying at University Farm .....	1,500.00	
F. C. H. Flossfeder, Instructor in Viticulture.....	1,300.00	
John C. Bridwell, Instructor in Entomology.....	1,500.00	
A. B. Shaw, Assistant in Entomology.....	600.00	
<i>Carried forward</i> .....	\$90,532.92	\$71,251.08

# SALARY ROLL

393

*Brought forward* ..... \$90,532.92      \$71,251.08

W. G. Hummel, Instructor in Agricultural Education.....	1,500.00
R. C. Ingram, Instructor in Shop Work.....	1,300.00
S. H. Beckett, Instructor in Irrigation.....	720.00
S. D. Wilkins, Instructor in Poultry Husbandry from July 1, 1911, to October 31, 1911, at \$1,200 per annum.....	400.00
G. P. Gray, Chemist in Insecticides.....	1,200.00
W. B. Boys, Assistant Cerealist from November 1, 1911, to June 30, 1912, at \$1,000 per annum.....	666.64
H. D. Young, Chemist at Whittier.....	1,500.00
A. R. Tylor, Assistant Plant Pathologist at Whittier.....	1,200.00
E. W. Rust, Assistant Entomologist at Whittier from July 1, 1911, to October 31, 1911, at \$1,200 per annum.....	400.00
L. T. Sharp, Assistant in Soils.....	1,200.00
W. V. Cruess, Assistant in Zymology.....	1,200.00
Katherine Jones, Assistant in Agricultural Education.....	720.00
C. L. Roadhouse, Instructor in Veterinary Science and Manager of the University Dairy.....	1,800.00
F. M. Hayes, Instructor in Veterinary Science.....	1,800.00
J. F. Mitchell, Assistant in Hog Cholera Immunization.....	1,200.00
Earl Morris, Field Assistant in Santa Clara County in a study of the Life History of the California Peach Root Borer and Treatment thereof (without salary).....	
W. H. Volck, Field Assistant in Monterey County in the Control of Potato Worm, and in Santa Cruz County in special study of control measures for the woolly aphid (without salary) .....	

107,339.56

## Anatomy

R. C. Moody, Assistant Professor of Anatomy (on leave first half-year at two-thirds salary).....	\$1,666.62
A. M. dal Piaz, Instructor in Anatomy .....	1,300.00
Edward F. Miller, Technical Assistant in Anatomy.....	1,200.00
R. W. Harvey, Instructor in Anatomy.....	1,400.00
Ruby L. Cunningham, Assistant in Anatomy.....	600.00

6,166.62

## Anthropology

A. L. Kroeber, Associate Professor and Secretary of Department of Anthropology and Curator of Anthropological Museum .....	\$2,400.00
T. T. Waterman, Instructor in Anthropology and Assistant Curator .....	1,200.00
N. C. Nelson, Instructor and Assistant Curator.....	1,200.00
E. D. Thayer, Jr., Assistant Secretary from July 1, 1911, to October 31, 1911, at \$780 per annum.....	260.00
Mabel J. Holum, Assistant Secretary from January 1, 1912, to June 30, 1912, at \$720 per annum.....	360.00
Arthur Poyser, Preparator.....	840.00
Arthur Warburton, Preparator.....	960.00

7,220.00

*Carried forward* ..... \$191,977.26

Brought forward ..... \$191,977.26

### Architecture

John Galen Howard, Professor of Architecture.....	\$4,000.00
W. C. Hays, Assistant Professor of Architecture (part time)	1,200.00
H. W. Seawell, Instructor in Water-coloring and Pen and Ink Drawing .....	800.00
M. Earl Cummings, Instructor in Modeling.....	600.00
Warren Perry, Instructor .....	1,000.00
Bessy Sprague, Librarian and Clerk.....	840.00

8,440.00

### Astronomy

A. O. Leuschner, Professor of Astronomy and Director of Students' Observatory .....	\$3,300.00
R. T. Crawford, Associate Professor of Practical Astronomy (leave of absence on two-thirds salary).....	1,600.00
D. W. Morehouse, Instructor in Astronomy.....	1,200.00
S. Einarsson, Instructor in Practical Astronomy.....	1,100.00
W. F. Meyer, Instructor in Astronomy.....	1,100.00
Estella A. Glancy, Watson Assistant.....	1,200.00
Sophia Levy, Watson Assistant.....	900.00

10,400.00

### Botany

W. A. Setchell, Professor of Botany.....	\$3,600.00
W. L. Jepson, Associate Professor of Dendrology.....	2,200.00
H. M. Hall, Assistant Professor of Economic Botany and Assistant Botanist to Agricultural Experiment Station...	1,900.00
A. R. Moore, Assistant Professor of Physiology.....	1,600.00
H. Goodspeed, Assistant in Botany.....	900.00
H. P. Chandler, Assistant in Botany.....	600.00
C. W. Shuquist, Janitor and Mech.....	780.00
C. A. Purpus, Botanical Collector (without salary).....	
T. S. Brandegee, Honorary Curator in the Herbarium (without salary) .....	

11,580.00

### Celtic

J. J. O'Hegarty, Reader in Irish.....	\$600.00
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600.00

### Chemistry

E. O'Neill Professor of Inorganic Chemistry.....	\$3,600.00
M. S. Sherrill, Assistant Professor of Theoretical Chemistry from January 1, 1912, to June 30, 1912, at \$3,000 per annum .....	1,500.00
W. C. Blasdale, Associate Professor of Chemistry.....	2,200.00
W. C. Morgan, Assistant Professor of Chemistry.....	2,000.00
H. C. Biddle, Assistant Professor of Chemistry.....	2,000.00
Edward Booth, Assistant Professor of Chemistry.....	1,600.00
C. E. Burke, Instructor in Chemistry.....	1,000.00
Chas. Gilman, Storekeeper.....	1,100.00

Carried forward ..... \$15,000.00 \$222,997.26

# SALARY ROLL

395

<i>Brought forward</i> .....	\$15,000.00	\$222,997.26
Mabelle E. Jewell, Clerk from August 1, 1911, to June 30, 1912, at \$900 per annum .....	825.00	
J. A. Madsen, Laboratory Mechanic (leave of absence from June 15 to June 30, 1912, without salary).....	1,054.09	
W. K. Gaylord, Assistant in Chemistry from July 1, 1911, to April 19, 1912, at \$900 per annum.....	722.50	
O. L. Brauer, Assistant in Chemistry.....	900.00	
E. C. Lane, Assistant in Chemistry from March 15, 1912, to May 15, 1912, at \$900 per annum.....	150.00	
J. T. Winkler, Assistant in Chemistry.....	600.00	
Wm. Meyer, Assistant in Chemistry.....	600.00	
E. W. Gruer, Assistant in Chemistry.....	500.00	
E. S. Alderman, Assistant in Chemistry.....	400.00	
G. B. Moody, Assistant in Chemistry.....	400.00	
A. M. Weston, Assistant in Chemistry.....	400.00	
W. H. Reese, Lecturer in Technical Chemistry from January 1 to June 30, 1912, at \$500 per annum.....	250.00	
B. Speed, Lecturer in Technical Chemistry from January 1 to June 30, 1912, at \$500 per annum.....	250.00	
Mrs. Sarah F. L. Rising, Carnegie Foundation allowance paid to Mrs. Rising as widow of the late W. B. Rising....	1,035.00	
		23,086.59

## Civil Engineering

Chas. Derleth, Jr., Professor of Civil Engineering.....	\$4,000.00	
Frank Soule, Professor Emeritus of Civil Engineering, total salary \$2,200, of which \$2,045 is paid by Carnegie Foundation .....	2,200.00	
Chas. Gilman Hyde, Professor of Sanitary Engineering.....	3,300.00	
T. B. Sears, Associate Professor of Railroad Engineering from July 1, 1911, to January 31, 1912, at \$2,500 per annum .....	1,458.31	
H. J. Kesner, Assistant Professor in Civil Engineering.....	1,500.00	
A. C. Alvarez, Instructor in Civil Engineering.....	1,300.00	
A. J. Eddy, Instructor in Civil Engineering.....	1,100.00	
H. S. Griswold, Instructor in Civil Engineering.....	1,300.00	
G. I. Gay, Instructor in Civil Engineering.....	1,200.00	
Ralph A. White, Instructor in Civil Engineering from January 22, 1912, to June 30, 1912, at \$1,000 per annum .....	444.42	
Val. Arntzen, Expert Mechanic in Civil Engineering Laboratory .....	1,800.00	
Nettie Meek, Clerk.....	1,000.00	
H. H. Harder, Assistant in Testing Laboratory from September 1, 1911, to June 30, 1912, at \$900 per annum.....	750.00	
J. R. Shields, Assistant in Testing Laboratory from July 1 to August 31, at \$900 per annum.....	150.00	
		21,502.73

## Dental Department

Dr. J. G. Sharp, Professor of the Principles and Practice of Surgery, and Dean.....	\$1,000.00	
Dr. G. S. Millberry, Superintendent in the Dental Department and Professor of Chemistry and Metallurgy.....	3,000.00	
<i>Carried forward</i> .....	\$4,000.00	\$267,586.58

<i>Brought forward</i> .....	\$4,000.00	\$267,586.58
Dr. H. B. Carey, Instructor in Anatomy and Histology, Materia Medica and Therapeutics.....	600.00	
Dr. Elmer E. Evans, Assistant Instructor.....	200.00	
Dr. W. F. Sharp, Professor of Prosthetic Dentistry.....	500.00	
Dr. J. D. Hodgen, Professor of Operative Dentistry.....	500.00	
Dr. J. B. Tufts, Professor of Dental Pathology and Thera- peutics and Orthodontia .....	500.00	
Dr. G. L. Bean, Professor of Dental Porcelain.....	500.00	
Dr. H. T. Moore, Lecturer on Surgery.....	100.00	
Dr. S. W. Hussey, Instructor in Extracting.....	100.00	
Dr. Louis Graham, Assistant in Operative Dentistry.....	100.00	
Dr. R. A. Day, Instructor in Orthodontia Technic.....	100.00	
Dr. A. H. Suggett, Lecturer and Clinical Instructor in Orthodontia .....	150.00	
Dr. S. C. Davis, Assistant in Dental Porcelain (without salary).		
Dr. F. B. Kenward, Assistant in Dental Porcelain.....	100.00	
Dr. J. E. Gurley, Instructor in Chemistry.....	150.00	
Dr. M. T. Rhodes, Demonstrator in Clinical Dentistry.....	100.00	
Dr. O. P. Roller, Special Instructor in Dental Porcelain (without salary).		
Mr. Louis Bartlett, Lecturer in Dental Jurisprudence.....	50.00	
Dr. R. E. Keys, Librarian.....	300.00	
Dr. Malcolm Goddard, Instructor in Comparative Anatomy....	100.00	
Stanley L. Dod, Reader in Dental Pathology and Therapeutics	100.00	
H. E. Rudee, Assistant Demonstrator in Clinical Dentistry....	100.00	
F. E. Hart, Instructor in Dental Technics from August 22, 1911, to June 30, 1912, at \$3,000 per annum.....	2,583.33	
		10,933.33

NOTE—Dr. S. S. Maxwell receives \$350 as Associate Professor in Physiology; this amount is added to his salary appearing under "Physiology."

A. W. Lee receives \$500 as Instructor in Pathology; this amount is added to his salary appearing under "Pathology."

### Drawing

H. Kower, Associate Professor of Drawing.....	\$2,700.00	
W. J. Wythe, Assistant Professor of Drawing.....	1,700.00	
C. Chapel Judson, Assistant Professor of Drawing.....	1,700.00	
H. B. Monges, Instructor in Drawing.....	1,300.00	
K. E. Neuhaus, Instructor in Drawing.....	1,000.00	
		8,400.00

### Economics

A. C. Miller, Flood Professor of Political Economy and Commerce (leave for first half-year on two-thirds salary)	\$3,333.30	
C. C. Plehn, Professor of Finance (on the Flood Foundation)	3,300.00	
H. R. Hatfield, Professor of Accounting (on the Flood Foundation), and Secretary of the College of Commerce (on leave for first half-year at two-thirds salary at \$3,000; on return salary to be at the rate of \$3,300 in addition to secretaryship of \$300).....	2,800.00	
<i>Carried forward</i> .....	\$9,433.30	\$286,919.91



<i>Brought forward</i> .....	\$9,433.30	\$286,919.91
W. C. Mitchell, Professor of Political Economy (on the Flood Foundation) .....	3,300.00	
A. W. Whitney, Associate Professor Insurance and Mathematics (one-third chargeable to Mathematics).....	2,400.00	
Lincoln Hutchinson, Assistant Professor of Commerce (on the Flood Foundation), and Advisor (\$500 chargeable to Administration) .....	2,700.00	
Jessica B. Peixotto, Assistant Professor of Sociology.....	2,000.00	
Stuart Daggett, Assistant Professor of Railway Economics (on the Flood Foundation) and Secretary of College of Commerce for first half-year at \$300 per annum.....	2,150.00	
John G. Brooks, Lecturer for first half-year.....	2,000.00	
W. C. Fankhauser, Flood Fellow in Commerce.....	400.00	
Lillian R. Matthews, Flood Fellow in Commerce.....	400.00	
S. Blum, Assistant in Economics.....	800.00	
L. Giamboni, Assistant in Economics from July 1, 1911, to January 31, 1912, at \$600 per annum.....	350.00	
Lucy Stebbins, Lecturer in Charities, without additional salary (salary included in Administration).		
F. G. Athearn, Lecturer in Railway Economics (without salary).		
		25,933.30

### Education

A. F. Lange, Professor of the Theory and Practice of Education, \$4,000, and Dean of the Faculties \$500.....	\$4,500.00	
E. E. Brown, Hon. Professor of Education (without salary).		
C. E. Rugh, Associate Professor of Education.....	2,700.00	
W. S. Thomas, Assistant Professor of Education and Examiner of Schools .....	2,200.00	
H. G. Lull, Acting Assistant Professor of Education.....	1,200.00	
R. C. Boone, Lecturer in Education.....	3,000.00	
John Swett, Hon. Lecturer (without salary).		
W. L. Schurz, Assistant in Education.....	600.00	
		14,200.00

### Electric Light and Power

Ira E. Currier, Engineer.....	\$1,200.00	
W. H. Lozier, Electrician.....	1,200.00	
A. D. White, Storekeeper and Machinist.....	1,200.00	
		3,600.00

### English

C. M. Gayley, Professor of the English Language and Literature .....	\$4,000.00	
C. B. Bradley, Professor of Rhetoric, Emeritus (\$1,750 of this amount is paid by the Carnegie Foundation).....	1,800.00	
C. W. Wells, Associate Professor of English Composition....	2,700.00	
Wm. D. Armes, Associate Professor of American Literature \$2,000, and Chairman of Musical and Dramatic Committee \$500 (this last item chargeable to Administration Salaries) .....	2,500.00	
<i>Carried forward</i> .....	\$11,000.00	\$330,653.21

<i>Brought forward</i> .....	\$11,000.00	\$330,653.21
M. C. Flaherty, Associate Professor of Forensics.....	2,400.00	
W. M. Hart, Associate Professor of English Philology.....	2,400.00	
T. F. Sanford, Assistant Professor of English Literature...	1,800.00	
B. P. Kurtz, Assistant Professor of English.....	1,900.00	
G. A. Smithson, Instructor in English Philology.....	1,300.00	
C. D. von Neumayer, Instructor in Public Speaking (leave of absence on two-thirds salary).....	1,000.00	
F. T. Blanchard, Instructor in English.....	1,200.00	
H. E. Cory, Instructor in English.....	1,200.00	
G. R. MacMinn, Instructor in English.....	1,100.00	
L. Bacon, Instructor in English.....	1,100.00	
H. L. Bruce, Teaching Fellow in English.....	600.00	
S. B. Hustvedt, Teaching Fellow in English.....	600.00	
		27,600.00

**Geography**

George Davidson, Emeritus Professor of Geography from July 1, 1911, to December 31, 1911, at \$750 per annum	\$ 350.00	
R. S. Holway, Assistant Professor of Physical Geography...	2,000.00	
W. G. Reed, Instructor in Climatology.....	1,000.00	
		3,350.00

**Geology and Mineralogy**

A. C. Lawson, Professor of Mineralogy and Geology (on leave first half-year at two-thirds salary).....	\$3,333.30	
G. D. Louderback, Associate Professor of Geology.....	2,200.00	
A. S. Eakle, Assistant Professor of Mineralogy.....	2,000.00	
H. O. Wood, Instructor in Mineralogy and Geology.....	1,400.00	
C. L. Baker, Instructor in Mineralogy and Geology from July 1, 1911, to December 31, 1911, at \$1,200 per annum .....	600.00	
E. F. Davis, Assistant in Mineralogy and Geology.....	600.00	
R. G. Davies, Assistant in Mineralogy and Geology.....	600.00	
R. M. Rowe, Assistant in Mineralogy and Geology.....	900.00	
		11,633.30

**German**

H. K. Schilling, Professor of German Language and Literature	\$4,000.00	
A. Putzker, Emeritus Professor of German Literature (\$1,500 of this is paid by Carnegie Foundation).....	2,000.00	
J. H. Senger, Associate Professor of German.....	2,400.00	
L. J. Demeter, Assistant Professor of German.....	1,800.00	
Clarence Paschall, Assistant Professor of German (leave of absence for year at two-thirds salary).....	1,066.56	
R. Pinger, Assistant Professor of German.....	1,600.00	
Paul Boehneke, Assistant in German.....	900.00	
F. A. Wyneken, Assistant in German.....	900.00	
Marie K. Lazarus, Assistant in German from July 1, 1911, to December 31, 1911, at \$500 per annum.....	250.00	
Sophie Wolff, Assistant in German from January 1, 1912, to June 30, 1912, at \$500 per annum.....	250.00	
F. Schraidt, Assistant in German.....	500.00	
F. Schneider, Assistant in German.....	500.00	
		16,166.56

*Carried forward* ..... \$389,403.07

# SALARY ROLL

399

*Brought forward* ..... \$389,403.07

## Greek

E. B. Clapp, Professor of the Greek Language and Literature	\$4,000.00	
Isaac Flagg, Professor Emeritus of Greek (salary paid by the Carnegie Foundation)	1,600.00	
J. T. Allen, Associate Professor of Greek	2,400.00	
C. M. Linforth, Assistant Professor of Greek	1,900.00	
		9,900.00

## History

H. Morse Stephens, Professor of History	\$5,000.00	
F. R. Bacon, Professor of Modern European History	3,000.00	
H. E. Bolton, Professor of American History	4,000.00	
F. J. Teggart, Associate Professor of Pacific Coast History (without salary, and Honorary Curator of the Bancroft Library).		
L. A. Paetow, Assistant Professor of English History	2,000.00	
R. F. Scholz, Assistant Professor of Ancient History	1,900.00	
J. N. Bowman, Assistant Professor of Mediaeval History	2,000.00	
E. I. McCormac, Assistant Professor of American History	1,700.00	
Don E. Smith, Assistant Professor of History and Geography, and Secretary of Department of History (on leave for second half-year at two-thirds salary)	1,583.22	
E. C. Davidson, Teaching Fellow in History	600.00	
J. E. Chapman, Teaching Fellow in History	600.00	
J. G. Iliff, Teaching Fellow in History	600.00	
J. Van Nostrand, Teaching Fellow in History	600.00	
		23,583.22

## Hygiene

E. F. Reinhardt, Professor of Hygiene and University Physician	\$4,000.00	
J. R. Greenleaf, Honorary Professor of Military and Public Hygiene (without salary).		
E. S. Bancroft, Lecturer on Hygiene and Medical Examiner (on leave for one year without pay).		
Romilda Paroni, Lecturer on Hygiene and Medical Examiner	1,500.00	
E. B. Hoag, Lecturer in Public Hygiene	1,200.00	
W. A. Sawyer, Director of State Hygienic Laboratory (without salary).		
Eugene S. Kilgore, Medical Examiner	1,200.00	
Ethel Sherman, Superintendent of Infirmary	1,200.00	
John N. Force, Assistant Medical Examiner	1,000.00	
		10,100.00

## Irrigation

B. A. Etcheverry, Assoc. Professor of Irrigation Engineering	\$2,400.00	
Albert E. Chandler, Assistant Professor of the Institutions of Irrigation	1,700.00	
		4,100.00

*Carried forward* ..... \$4,100.00 \$437,086.29

*Brought forward* ..... \$4,100.00 \$437,086.29

### Jurisprudence

Wm. Carey Jones, Professor of Jurisprudence.....	\$4,000.00	
Curtis H. Lindley, Honorary Professor of Law of Mines and Water (without pay).		
Orrin K. McMurray, Professor of Law.....	3,000.00	
G. H. Boke, Professor of Law.....	2,700.00	
A. M. Kidd, Assistant Professor of Law.....	2,000.00	
C. G. White, Lecturer in Law.....	500.00	
Max Thelen, Lecturer in Law.....	500.00	
Lester H. Jacobs, Lecturer in Law on Insurance.....	1,000.00	
A. G. Tasheira, Lecturer in Law (leave of absence without salary for second half-year).....	175.00	
J. P. Chamberlain, Lecturer in Law (on leave without salary).		
Maurice E. Harrison, Lecturer Commercial Law.....	350.00	
Warren Olney, Jr., Lecturer in Law (on leave without salary).		
W. E. Colby, Lecturer on Law of Mines.....	500.00	
Matthew C. Lynch, Instructor in Law.....	1,500.00	
Rosamond Parma, Librarian and Clerk.....	900.00	
Allan P. Matthew, Lecturer on Law of Interstate Trans- portation (without salary).		
		17,125.00

NOTE.—Farnham P. Griffiths, Lecturer in Law, \$500, ap-  
pears in Administrative Salaries.

### Latin

W. A. Merrill, Professor of the Latin Language and Litera- ture .....	\$4,000.00	
L. J. Richardson, Associate Professor of Latin.....	2,400.00	
Clifton Price, Assistant Professor of Latin.....	1,800.00	
H. C. Nutting, Assistant Professor of Latin.....	2,000.00	
O. M. Washburn, Assistant Professor of Archaeology.....	1,900.00	
Torsten Petersson, Instructor in Latin.....	1,500.00	
M. E. Deutsch, Instructor in Latin.....	1,300.00	
S. B. Clark, Instructor in Latin.....	1,500.00	
		16,400.00

### Lick Observatory

W. W. Campbell, Director and Astronomer (on leave to September 29, 1911).....	\$5,000.00	
R. H. Tucker, Astronomer (returns after being on leave for three years; leave extended to November 1, 1911, without pay. Salary is at the rate of \$2,400 per annum)	1,600.00	
Heber D. Curtis, Astronomer.....	2,400.00	
R. G. Aitken, Astronomer (Acting Director until Septem- ber 25, 1911) .....	2,700.00	
W. H. Wright, Astronomer.....	2,400.00	
R. E. Wilson, Assistant.....	1,200.00	

*Carried forward* ..... \$15,300.00 \$470,611.29

# SALARY ROLL

401

*Brought forward* ..... \$15,300.00 \$470,611.29

R. S. Sheppard, Assistant.....	1,000.00
Kevin Burns, Martin Kellogg Fellow for the period, August 15, 1911, to August 15, 1912; payable in two installments, August 1, 1911, and February 1, 1912.....	1,200.00
Paul W. Merrill, Fellow.....	600.00
R. Young, Fellow.....	600.00
Carl C. Kiess, Fellow.....	600.00
Ruth Standen, Secretary .....	1,000.00
J. E. Hoover, Carpenter .....	1,380.00
H. Bachman, Instrument-maker .....	1,350.00
M. N. Waterhouse, Janitor from July 1, 1911, to March 31, 1912, at \$720 per annum.....	540.00
David Westwater, Janitor from April 9, 1912, to June 30, 1912, at \$720 per annum.....	164.00
H. Graun, Engineer .....	960.00
Frank Knobloch, Laborer .....	690.00

## *D. O. Mills Fund*

J. H. Moore (Chile), Acting Astronomer in charge of the D. O. Mills Expedition.....	2,750.00
Roscoe F. Sanford (Chile), Assistant.....	1,800.00
Mrs. J. H. Moore, Assistant.....	1,050.00

## *Carnegie Fund*

Miss A. M. Hobe, Assistant (on leave without salary from July 1, 1911, to August 31, 1911).....	875.00
	<hr/> 31,859.00

## Mathematics

M. W. Haskell, Professor of Mathematics.....	\$3,600.00
Geo. C. Edwards, Professor of Mathematics.....	3,000.00
J. A. Noble, Associate Professor of Mathematics and Assistant Examiner (on leave at two-thirds salary for second half-year. Salary increased to \$2,200).....	1,833.30
D. N. Lehmer, Associate Professor of Mathematics (on leave first half-year at two-thirds salary).....	2,000.00
T. M. Putnam, Assistant Professor of Mathematics.....	1,900.00
H. McDonald, Assistant Professor of Mathematics.....	1,700.00
Chas. Kuschke, Instructor in Mathematics.....	1,200.00
E. A. Bernstein, Instructor in Mathematics.....	1,200.00
E. M. Woods, Instructor in Mathematics.....	1,100.00
Frank Irwin, Instructor in Mathematics.....	1,400.00
E. Buck, Instructor in Mathematics.....	1,400.00
Delia Smith, Teaching Fellow in Mathematics.....	600.00
R. Williams, Teaching Fellow in Mathematics.....	600.00
E. N. Wright, Teaching Fellow in Mathematics.....	600.00
Mrs. Martha S. D. Stringham, Carnegie Foundation allowance as widow of the late Prof. Irving C. Stringham....	960.00
	<hr/> 23,093.30

NOTE.—A. W. Whitney, Associate Professor of Mathematics, appears under Department of Economics.

*Carried forward* ..... \$525,563.59



Brought forward ..... \$525,563.59

### Mechanics

C. L. Cory, John W. Mackay, Jr., Professor of Electrical Engineering and Director of Electric Light and Power Plant .....	\$4,000.00
H. W. Reynolds, Associate Professor Mechanical Engineering (on leave at two-thirds pay).....	1,400.00
Robert Sibley, Associate Professor Mechanical Engineering .....	2,100.00
J. N. LeConte, Associate Professor of Mechanical Engineering .....	2,200.00
G. C. Noble, Assistant Professor of Electrical Engineering from July 1, 1911, to September 30, 1911, at \$1,800 per annum .....	450.00
H. F. Fischer, Assistant Professor of Electrical Engineering from October 1, 1911, to June 30, 1912, at \$1,500 per annum .....	1,125.00
C. F. Gilcrest, Instructor in Electrical Engineering.....	1,300.00
A. B. Domonoske, Instructor in Mechanical Engineering.....	1,000.00
B. D. Moses, Assistant in Mechanical Engineering.....	900.00
W. C. Fox, Clerk.....	1,000.00
G. E. Cox, Assistant in Mechanics and Foreman in Woodwork .....	1,500.00
James George, Assistant in Mechanics and Foreman in Ironwork .....	1,350.00
F. E. Pernot, Mackay Fellow.....	600.00
T. A. Davidson, Mackay Fellow.....	600.00

19,525.00

### Medicine

Dr. A. A. D'Ancona, Dean from July 1, 1911, to January 8, 1912, at \$2,400 per annum (Acting Dean for balance of year without salary) .....	\$1,253.38
Dr. W. Jarvis Barlow, Dean of the Los Angeles Department (without salary).	

1,253.38

### Military Science and Tactics

E. M. Lewis, Professor of Military Science, etc. ....	800.00
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### Mining

S. B. Christy, Professor of Mining and Metallurgy.....	\$4,000.00
E. B. Durham, Associate Professor of Mining.....	2,400.00
E. A. Hersam, Associate Professor of Metallurgy.....	2,400.00
W. S. Morley, Assistant Professor of Metallurgy.....	2,000.00
George Spencer, Mechanician.....	1,200.00
E. P. Willoughby, Helper.....	1,000.00
W. A. McKee, Clerk for July and August at \$900 per annum .....	150.00
N. Wilkie, Clerk, from September 1 to June 30, at \$900 per annum .....	750.00
J. L. Talbot, Storekeeper and Helper.....	1,000.00
H. N. Herrick, Assistant in Mining and Mechanical Draughtsman .....	1,400.00

16,300.00

Carried forward ..... \$563,441.97

## SALARY ROLL

403

Brought forward ..... \$563,441.97

## Music

J. F. Wolle, Professor of Music (on leave at two-thirds salary) .....	\$2,000.00	
Paul Steindorff, Choragus.....	1,000.00	
		3,000.00

## Oriental Languages

John Fryer, Agassiz Professor of Oriental Languages and Literatures .....	\$4,000.00	
Y. S. Kuno, Instructor in Japanese.....	1,000.00	
E. James, Assistant in Chinese.....	720.00	
		5,720.00

## Palaeontology

John C. Merriam, Associate Professor of Palaeontology and Historical Geology .....	\$3,000.00	
B. L. Clark, Instructor in Palaeontology.....	1,200.00	
C. Guintyllo, Assistant in Palaeontology.....	1,100.00	
		5,300.00

## Pathology and Bacteriology

P. Gay, Professor of Pathology.....	\$4,000.00	
G. Fitzgerald, Associate Professor of Bacteriology.....	2,500.00	
C. Hall, Assistant in Bacteriology.....	900.00	
Y. Rusk, Assistant Professor of Pathology.....	2,000.00	
W. Lee, Instructor in Pathology (\$500 of this salary is chargeable against Dental Department as Instructor in Pathology in that Department).....	1,700.00	
		11,100.00

## Philosophy

H. Howison, Professor of Philosophy Emeritus (\$2,875 of this salary is paid by Carnegie Foundation).....	\$3,000.00	
M. Stratton, Professor of Psychology.....	4,000.00	
H. Rieber, Professor of Logic \$3,000, and Dean of the Summer Session \$1,000 (the latter item charged to Summer Session) .....	4,000.00	
U. Pope, Assistant Professor of Philosophy.....	1,800.00	
so. P. Adams, Assistant Professor of Philosophy (on leave without salary).		
I. Lewis, Instructor in Philosophy.....	1,200.00	
arner Brown, Instructor in Psychology.....	1,500.00	
C. Becker, Instructor in Philosophy.....	1,300.00	
S. Jackson, Assistant in Psychology from July 1, 1911, to December 31, 1911, at \$500 per annum.....	250.00	
ma Noteware, Assistant in Psychology from January 1, 1912, to June 30, 1912, at \$500 per annum.....	250.00	
		17,300.00
Carried forward .....		\$605,861.97

Brought forward ..... \$605,861.97

### Physical Culture

W. E. Magee, Professor of Physical Culture.....	\$2,200.00
V. V. Ligda, Assistant Professor of Physical Culture.....	1,400.00
Genevra E. Magee, Assistant in Physical Culture.....	1,000.00
Louise A. Place, Assistant in Physical Culture.....	840.00
R. M. Scott, Assistant in Physical Culture from July 1, 1911, to January 31, 1912, at \$480 per annum, and from February 1, 1912, to June 30, 1912, at \$1,000 per annum .....	696.65
	<hr/> 6,136.65

### Physics

F. Slate, Professor of Physics.....	\$4,000.00
E. P. Lewis, Professor of Physics.....	3,300.00
W. J. Raymond, Associate Professor of Physics.....	2,400.00
R. S. Minor, Associate Professor of Physics.....	2,500.00
E. E. Hall, Associate Professor of Physics (on leave dur- ing first half-year at two-thirds salary).....	2,000.00
T. S. Elston, Instructor of Physics.....	1,600.00
Raymond B. Abbott, Instructor in Physics.....	1,300.00
W. R. Stamper, Mechanician .....	1,800.00
C. G. Steinitz, Mechanician .....	1,500.00
G. O. Liebermann, Helper in Laboratory.....	900.00
G. P. Kraus, Laboratory Helper.....	900.00
R. L. Cooke, Assistant in Physics.....	500.00
D. I. Cone, Assistant in Physics.....	500.00
F. C. Czarneckie, Assistant in Physics.....	500.00
G. I. Johnstone, Assistant in Physics from July 1, 1911, to December 31, 1911, at \$500 per annum.....	250.00
W. D. Bannister, Assistant in Physics from January 1, 1912, to June 30, 1912, at \$500 per annum.....	250.00
V. Petrovsky, Assistant in Physics.....	500.00
L. H. Smith, Assistant in Physics.....	500.00
W. S. Wake, Assistant in Physics.....	500.00
C. A. Smith, Assistant in Physics.....	500.00
G. H. Bardsley, Whiting Fellow.....	600.00
	<hr/> 26,800.00

### Physiology and Physiological Chemistry

S. S. Maxwell, Associate Professor of Physiology (\$2,700 + \$350 charged to Dentistry, as Associate Professor of Physiology in that department).....	\$3,050.00
T. B. Robertson, Associate Professor of Physiological Chemistry .....	2,700.00
T. C. Burnett, Instructor in Physiology.....	1,300.00
L. R. Beauchamp, Technical Assistant.....	720.00
C. B. Bennett, Assistant in Physiological Chemistry.....	600.00
	<hr/> 8,370.00
Carried forward .....	<hr/> \$647,168.62

# SALARY ROLL

405

*Brought forward* ..... \$647,168.62

## Political Science

Bernard Moses, Professor of History and Political Science, Emeritus: (\$2,400 of this is paid by the Carnegie Foundation) .....	\$2,666.00
David P. Barrows, Professor of Political Science \$3,600, and Dean of the Graduate School \$300 .....	3,900.00
Thomas H. Reed, Associate Professor of Government.....	2,200.00
F. K. Kruger, Teaching Fellow .....	600.00
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	9,366.00

## Printing Office

J. W. Flinn, Superintendent .....	2,400.00
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## Romanic Languages

Lucien Foulet, Professor of the French Language and Literature from July 1, 1911, to January 31, 1912, at \$4,000 per annum .....	\$2,333.31
R. Schevill, Professor of Spanish .....	3,000.00
F. Wilmsen, Associate Professor of French.....	2,500.00
S. A. Chambers, Assistant Professor of French (on leave at two-thirds salary) .....	1,266.66
J. T. Clark, Assistant Professor of Romanic Philology.....	2,000.00
G. E. Fauchaux, Assistant Professor of French Literature....	1,800.00
J. A. Child, Assistant Professor in Italian.....	1,700.00
Carlos Bransby, Assistant Professor of Spanish.....	1,600.00
C. H. S. Howard, Instructor in Spanish.....	1,500.00
E. B. Lamare, Instructor in French.....	1,100.00
Alfred Solomon, Instructor in French.....	1,300.00
Mrs. J. H. Greenleaf, Instructor in French.....	1,200.00
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	21,299.97

## Sanskrit

A. W. Ryder, Assistant Professor of Sanskrit.....	1,800.00
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## Semitic Languages

Villiam Popper, Assistant Professor of Semitic Languages....	\$2,000.00
Abbi Martin Meyer, Lecturer in Semitic History and Literature (without salary). .....	
	<hr/>
	2,000.00

## Slavic Languages

George R. Noyes, Associate Professor of Slavic Languages.....	2,200.00
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## University Extension

- on E. Smith, Lecturer and Acting Director (without salary).  
 . J. Teggart, Lecturer (without salary).  
 . P. Kurtz, Lecturer (without salary).

*Carried forward* ..... \$686,234.59

Brought forward ..... \$686,234.59

### Vertebrate Zoology

Joseph Grinnell, Director of the California Museum of Vertebrate Zoology.

Harry S. Swarth, Curator of Birds.

Walter P. Taylor, Assistant Curator of Mammals.

(Salaries for the above are paid direct out of regular appropriation from Miss Alexander.)

### Wilmerding School

G. A. Merrill, Director from July 1, 1911, to January 31, 1912, at \$2,100 per annum and from February 1, 1912, to June 30, 1912, at \$1,666.68 per annum.....	\$1,919.45
Geo. F. Wood, Vice-Principal and Instructor in Plumbing....	2,100.00
R. M. Grant, Instructor in Carpentry.....	1,500.00
L. H. Werson, Instructor in Bricklaying.....	1,500.00
J. E. Maybeck, Instructor in Cabinet Making.....	1,500.00
Frank L. Dodge, Instructor in Electrical Work.....	1,500.00
Julia M. Edwards, Instructor in English Branches.....	1,500.00
W. Wirt, Instructor in Mathematics.....	1,500.00
J. McHenry, Instructor in Architectural Drawing.....	1,500.00
J. C. Christensen, Instructor in Science.....	1,500.00
Jessie N. Bell, Instructor in Industrial Art.....	1,350.00
Gladys M. Elliott, Office Assistant .....	660.00
J. E. Lozier, General Shop Assistant .....	1,200.00

19,229.45

### Zoology

W. E. Ritter, Professor of Zoology.....	\$3,000.00
C. A. Kofoid, Professor of Zoology.....	3,000.00
H. B. Torrey, Associate Professor of Zoology.....	2,500.00
J. F. Daniel, Assistant Professor of Zoology .....	1,600.00
J. A. Long, Instructor in Zoology.....	1,400.00
Robert G. Sharp, Assistant in Zoology.....	600.00
A. C. Chandler, Assistant in Zoology.....	600.00
C. W. Fender, Assistant in Zoology from July 1, 1911, to December 31, 1911, at \$600 per annum.....	300.00
G. E. Stone, Assistant in Zoology from January 1, 1912, to June 30, 1912, at \$500 .....	250.00
D. Cory, Assistant in Zoology from July 1, 1911, to December 31, 1911, at \$500 per annum and from January 1, 1912, to June 30, 1912, at \$600 per annum.....	550.00
W. H. Davisson, Helper, from July 1, 1911, to August 31, 1911, at \$900 per annum.....	150.00
L. Davisson, Helper, from September 1, 1911, to June 30, 1912, at \$480 per annum .....	400.00
Elizabeth Heald, Agassiz Research Assistant in Zoology.....	600.00

14,950.00

\$720,414.04



## SUMMARY OF INCOME

JULY 1, 1910, TO JUNE 30, 1911

From investments .....	\$203,382.24		
United States .....	75,000.00		
State of California .....	1,012,558.86		
		\$1,290,941.10	
Students' fees .....	\$96,724.43		
Dental Department .....	16,916.81		
Medical Department .....	9,455.64		
University Hospital .....	36,222.77		
Los Angeles Medical Department .....	7,324.30		
Sale of agricultural produce .....	89,589.31		
Miscellaneous .....	16,929.15		
Receipts from concerts, etc. ....	3,714.67		
		276,877.08	\$1,567,818.18
Gifts for current use .....	\$56,170.99		
Gifts for architectural expenses and for building work .....	14,968.00		
		71,138.99	1,638,957.17
Gifts for endowments .....		33,759.50	1,672,716.67
Turning over of funds (as repayment of loans, stu- dents' deposits due to be returned, etc.) .....		940,679.00	2,613,395.67

## SUMMARY OF EXPENDITURES

JULY 1, 1910, TO JUNE 30, 1911

Administration .....	\$240,202.21		
Library .....	55,004.81		
Agriculture (excluding building opera- tions, appearing under that head) ....	291,826.91		
Other departments .....	514,322.24		
Miscellaneous .....	13,666.25		
		\$1,115,022.42	
Scholarships and Prizes .....	\$19,390.00		
Summer Session .....	26,823.93		
Lick Observatory .....	43,410.42		
Dental Department .....	22,089.81		
Medical Department (including Univer- sity Hospital and Los Angeles Medical Department) .....	79,306.02		
		191,020.18	\$1,306,042.60
Musical and Dramatic .....	\$1,321.26		
Academy of Pacific Coast History .....	5,433.96		
		6,755.22	1,312,797.82
Watershed Lands: Purchase of lands in Strawberry Cañon .....		465.47	1,313,263.29
Carried forward .....			\$1,313,263.29

<i>Brought forward</i> .....		\$1,313,263.29
Kearney Estate: Expenditures made from bequest ....	202.77	1,313,466.06
Building operations .....	517,201.74	1,830,667.80
Wilmerding Trades School .....	30,459.49	1,861,127.29
Turning over of funds (as loans, repayment of students' deposits, etc.) .....	580,260.74	2,441,388.03

INCOME AVAILABLE FOR GENERAL EDUCATIONAL,  
ADMINISTRATIVE, AND SCIENTIFIC  
PURPOSES IN 1910-11

Total income available for current use:

Investments .....	\$203,382.24	
United States .....	75,000.00	
State of California .....	1,012,558.86	
		\$1,290,941.10
Students' fees .....	\$96,724.43	
Dental Department .....	16,916.81	
Medical Department .....	9,455.64	
University Hospital .....	36,222.77	
Los Angeles Medical Department .....	7,324.30	
Miscellaneous .....	106,518.46	
Receipts from concerts, etc. ....	3,714.67	
		276,877.08
Gifts for current use .....		56,170.99
		\$1,623,989.17

Deduct:

Permanent Building Fund moneys .....	\$177,693.39
Wilmerding School (expenditures) .....	30,459.49

Income on Endowment added to principal:

Alumni Association Life Membership Fund .....	215.37
Alumni Hall Fund .....	515.93
Bennett Prize Fund .....	32.47
Class of 1886 Loan Fund .....	276.69
Class of 1895 Loan Fund .....	12.30
Class of 1903 Loan Fund .....	53.84
Class of 1905 Fund .....	27.31
Class of 1908 Fund .....	14.67
Class of 1911 Loan Fund .....	1.93
Cole Scholarship Fund .....	129.38
Cook Prize Fund .....	17.00
Dental Endowment Fund .....	279.86
Doe Library Fund .....	10,359.25
Doe Library Completion Fund .....	812.80
Grubstake W. Loan Fund .....	5.15
Hamerslag Loan Fund .....	373.34
Medal Loan Fund .....	5.89
Men's Dormitory Fund .....	22.31

*Carried forward* ..... \$221,308.37    \$1,623,989.17

## INCOME AVAILABLE 1910-11

409

Brought forward ..... \$221,308.37    \$1,623,989.17

Prytanean Hospital Fund .....	41.29
Royer Endowment Fund .....	222.21
Walton Loan Fund .....	322.49

## Income payable to Class Secretaries:

Class of 1909 Endowment and Loan Fund .....	63.18
Class of 1910 Endowment .....	85.91
Class of 1911 Endowment .....	2.90

Receipts from concerts .....	3,714.67
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## State appropriations:

University Farm .....	92,277.36
Farmers' Institutes .....	10,000.00

Students' fees, Summer School of Surveying .....	3,647.89
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Students' fees, Summer School of Surveying Com- missary .....	4,960.42
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336,646.69

Available for current educational, scientific, and ad-  
ministrative purposes .....

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1,287,342.48

## Deduct also:

Dental Department (expenditures) .....	\$22,089.81
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Medical Department (expenditures, including Univer- sity Hospital and Los Angeles Medical Dept.) ....	79,306.02
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Anthropology Department (expenditures) .....	9,426.17
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Lick Observatory (expenditures) .....	43,410.42
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Sale of Keeler Volume .....	20.85
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## State appropriations:

Cereal Investigation .....	6,000.00
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Imperial County Investigation .....	4,136.85
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Plant Diseases, northern .....	8,578.36
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Viticulture .....	8,420.80
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Southern California Pathological Laboratory and equipment .....	20,581.51
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## Sales funds:

Agricultural Experiment Station .....	1.50
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University Farm .....	67,933.92
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Cereal produce .....	1,493.25
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Southern California Pathological Laboratory .....	1,906.82
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Viticultural produce .....	137.00
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California Educational Butter Scoring Contest .....	495.25
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273,938.53

Available at Berkeley for general educational, scientific, and adminis-  
trative purposes .....

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\$1,013,403.95

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## INCOME

JULY 1, 1910, TO JUNE 30, 1911

## Income on Investments:

Interest on mortgage and collateral loans .....	\$116,479.39
Interest on loans to students from endowed loan funds .....	232.93

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\$116,712.32

## Interest on bonds:

State bonds (from the State) .....	\$45,060.00
Diverted funds: from the State (see act approved March 3, 1893, Stats. 1893:75, and also amend- ment Stats. 1899:93) .....	4,785.00
Bear Gulch Water Company (three coupons due Jan- uary, 1909, July, 1909, and January, 1910) .....	12,300.00
Bear Gulch Water Company (two coupons accrued, due January, 1911, and July, 1911) .....	8,200.00
Oakland Traction Consolidated .....	750.00
Pacific Gas and Electric Company .....	100.00
Sacramento Gas and Electric Company .....	50.00
Southern Pacific Railroad, 1st Refunding 4s .....	1,320.00
Tonopah United Water Co. ....	600.00

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73,165.00

## Dividends on stocks:

Bank of California .....	\$775.00
Fireman's Fund Insurance Co. ....	1,200.00
Kennedy Mining and Milling Co. ....	3,180.00
Mackay Companies, preferred .....	2,816.00
San Francisco National Bank .....	300.00
University Land Co. ....	150.00
Weinstock-Lubin Real Estate Co., preferred .....	325.00

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8,746.00

## Rents:

University Cottages and Palmer House (after deduc- tion of structural and other repairs), net .....	\$1,109.69
Congressional Land: S. B. Sumner .....	20.00
Watershed Lands: (in Strawberry Cañon)	
Such Ranch .....	425.00
Seaman Cottage .....	50.00
House on Lot 5, University Heights .....	12.00
2642 Sylvan way, Berkeley .....	610.00
1615 Sixth street, West Berkeley .....	61.33
Broadway Terrace lots, Oakland .....	14.44
Potrero avenue lots, San Francisco .....	88.00
Wilmerding School vacant block and shops \$2,200.00 Less loss on compromise of rent and note given for rent .....	1,187.50
	<hr/> 1,012.50
Flood lands, Menlo Park (F. C. Sloan) .....	1,132.26
Lick Observatory lands (R. F. Morrow) .....	80.00
Thompson lot on Dearborn street, Chicago .....	3,000.00

<i>Carried forward</i> .....	\$7,615.22	\$198,623.32
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<i>Brought forward</i> .....	\$7,615.22	\$198,623.32
First street building, San Francisco, leased to Blake, Moffitt & Towne: rent for May and June, 1911 .....	\$1,800.00	
Less commission on lease .....	916.04	
	<u>883.96</u>	
		8,499.18
Interest at 2 per cent per annum on daily balances in hands of Treasurer .....		2,209.77
		<u>\$209,332.27</u>
Less proportion of income in Endowment Pool due to Mrs. Jane K. Sather .....	\$5,862.34	
Less proportion of income in Endowment Pool due to Madame Thérèse F. Colin .....	87.69	
	<u></u>	5,950.03
		<u>\$203,382.24</u>
United States:		
Morrill College Aid Fund .....	\$45,000.00	
Agricultural Experiment Station (Hatch Fund) .....	15,000.00	
Adams Fund .....	15,000.00	
	<u></u>	75,000.00
State of California:		
Three-fourths of the State University Fund (tax of three cents on each \$100 of assessed valuation): remaining one-fourth is devoted to Permanent Im- provements and appears under that head (total income from the three-cent tax was \$710,773.55)	\$533,080.16	
General appropriation: "For the support of the University" .....	100,000.00	
Special appropriations for Agriculture:		
Cereal Investigation .....	\$6,000.00	
Farmers' Institutes .....	10,000.00	
Hog Cholera Serum .....	1,961.93	
Imperial County Investigations .....	4,136.85	
Plant Diseases, northern .....	8,578.36	
Southern California Pathological Labor- atory .....	19,959.02	
Equipment at Whittier .....	622.49	
University Farm:		
Buildings .....	23,639.45	
Equipment .....	11,846.40	
Implements .....	1,058.85	
Improvement of Grounds .....	2,536.26	
Light, Power, Water, and Sewer...	816.60	
Livestock .....	4,328.29	
Salaries .....	24,504.67	
General Support .....	23,546.84	
	<u></u>	
<i>Carried forward</i> .....	\$143,536.01	\$633,080.16
		<u>\$278,382.24</u>



<i>Brought forward</i> .....	\$143,536.01	\$633,080.16	\$278,382.24
Viticulture .....	8,420.80		
		151,956.81	
Music .....		3,000.00	
Reimbursement for loss of income .....		40,828.50	
Printing .....		6,000.00	
			834,865.47

NOTE.—The total received (and receivable) from the the State of California was \$1,012,558.86, composed of the above figure of \$834,865.47 and Permanent Building Fund, \$177,693.39. The total income for the University Farm derived from the State is \$92,277.36, of which \$50,587.77 is for maintenance and support, and \$41,689.59 for buildings, equipment, and improvements.

#### Students' deposits and fees (net):

##### Deposits (balances retained for laboratory charges):

Agriculture .....	\$370.85	
Bacteriology .....	514.25	
Bacteriology (Summer Session of 1910) .....	40.00	
Bacteriology (Summer Session of 1911) .....	51.00	
Botany .....	327.50	
Botany (Summer Session of 1911) ....	10.00	
Chemistry .....	10,893.50	
Chemistry (Summer Session of 1910)..	2.75	
Chemistry (Summer Session of 1911)..	1,140.00	
Civil Engineering .....	2,988.30	
Mechanics .....	2,265.15	
Mineralogy .....	453.25	
Mining .....	1,530.05	
Physics .....	4,919.75	
Physics (Summer Session of 1910) ....	15.50	
Physics (Summer Session of 1911) ....	267.00	
Physiology .....	59.45	
Psychology (Summer Session of 1911) .....	2.00	
Zoology .....	1,162.35	
Zymology .....	16.10	
		\$27,028.75

##### Fees:

Changing courses .....	\$283.00
Delayed registration for courses .....	894.00
Gymnasium .....	9,380.85
Infirmary .....	17,083.27
Infirmary (Summer Session of 1910)..	1,022.00
Non-resident (for students from outside California) .....	4,603.00
Seminar Rooms .....	21.75
Special Examinations .....	1,645.00
Summer School of Surveying, 1910 ....	547.89
Summer School of Surveying, 1911 ....	3,100.00

<i>Carried forward</i> .....	\$38,580.76	\$27,028.75	\$1,113,247.71
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*Brought forward* .....\$38,580.76    \$27,028.75    \$1,113,247.71

Summer School of Surveying (Commis- sary account) 1910 .....	220.42	
Summer School of Surveying (Commis- sary account) 1911 .....	4,740.00	
Summer Session course in Manual Training, 1910 .....	80.00	
Summer Session course in Manual Training, 1911 .....	93.00	
Summer Session course in Home Eco- nomics, 1911 .....	185.00	
Summer Session, 1910 .....	1,368.25	
Summer Session, 1911 .....	24,398.25	
Summer Session course in Zoology, 1911 .....	30.00	
	<hr/>	69,695.68

96,724.43

Dental Department: Fees and miscellaneous receipts, exclusive of donations .....	16,916.81
Medical Department: Fees and miscellaneous receipts .....	9,455.64
Los Angeles Medical Department: Fees and miscellaneous receipts .....	7,324.30
University Hospital in San Francisco: Miscellaneous receipts, exclusive of donations .....	36,222.77

Miscellaneous:

University Extension: Fees for courses .....	\$700.00
Printing and Publishing:	
Charges for work done by Printing	
Office .....	\$952.10
Sale of Publications .....	2,651.14
Sale of Weinstock Lectures .....	37.37
Sale of Brief Account of Lick Observ- atory .....	15.00
Sale of Miss Shinn's Pamphlet .....	25.30
Sale of Keeler Volume .....	20.85
Sale of Tebtunis Papyri .....	130.29
Sale of "Zoe" .....	22.00
Sale of Academy of Pacific Coast His- tory Publications .....	80.68
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3,934.73

Agricultural Income:

University Farm:

Creamery .....	\$41,363.70
Dormitory .....	12,273.01
Poultry sales .....	1,076.14
Stock sales, livestock .....	2,560.39
Stock sales, milk, etc. ....	2,104.19
Students' deposits .....	1,660.19
General produce .....	6,851.55
Veterinary sales .....	44.75
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\$67,933.92

*Carried forward* .....\$67,933.92    \$4,634.73    \$1,279,891.66

## PRESIDENT'S BIENNIAL REPORT

Brought forward .....	\$67,933.92	\$4,634.73	\$1,279,891.66
License fees and tax for inspection of commercial fertilizers .....	11,793.44		
License fees for sale of insecticides.....	1.00		
California Educational Butter Scoring Contest .....	495.25		
Sale of Adams Fund produce, etc .....	95.16		
Sale of agricultural produce .....	1.50		
Sale of cereal produce .....	1,493.25		
Sale of dairy produce .....	5,561.50		
Sale of dairy cattle .....	170.47		
Sale of Southern California Pathological Laboratory produce .....	137.00		
Sale of viticultural produce .....	137.00		
		89,589.31	
Sale of wood, lumber, junk, etc. ....	\$339.31		
Sale of mule .....	50.00		
Military belts .....	4.09		
Sale of empty carboys from Chemistry De- partment .....	112.00		
Reimbursement for labor, materials, light, and water .....	6,842.50		
Rock test, etc., made by Civil Engineering Department .....	301.00		
Reimbursement for postage, stenographic work, etc. ....	671.60		
Library fines .....	41.10		
Examination of schools .....	50.00		
Infirmary receipts for operations, laundry, prescriptions, etc. ....	2,933.89		
Certified copy of patent .....	5.00		
Interest on note of Reinhardt Lumber and Planing Mill Co. ....	\$47.94		
Less amount allowed in settle- ment .....	16.04		
	31.90		
Interest on deferred payments of W. H. Smyth for Batchelder Tract lots .....	96.48		
		11,478.87	
Wilmerding School: Director's receipts .....		815.55	
			106,518.46
Receipts from Musical and Dramatic events .....			3,714.67
Gifts for current use:			
Mrs. Hearst:			
Phoebe A. Hearst scholarships .....	\$2,400.00		
Anthropology .....	1,680.00		
Hearst Memorial Mining Building equipment .....	1,122.26		
Hearst Memorial Mining Building alterations .....	750.00		
		5,952.26	
(See also under "Donations for Erec- tion of Buildings, etc.")			
Carried forward .....		\$5,952.26	\$1,390,124.79

*Brought forward* ..... \$5,952.26 \$1,390,124.79

## Scholarships:

(Mrs. Hearst as above.)

(The State of California Scholarships  
are supported by \$3,500 from the  
three-cent tax.)

Levi Strauss Scholarships (the gift of Levi Strauss & Co.) .....	\$3,500.00	
Lincoln Scholarship .....	240.00	
Scholarship for Tracy Crane .....	125.00	
Deficiency of the LeConte Memorial Fel- lowship, donated by James K. Moffitt .....	145.00	
University Fellowship, Academy of Pa- cific Coast History, per Native Sons of the Golden West .....	750.00	
	<hr/>	4,760.00

## Prizes:

Bonnheim Prize .....	\$250.00	
Bryce Historical Essay Prize .....	100.00	
W. C. T. U. Essay Prize .....	50.00	
	<hr/>	400.00

## Library donations for current use:

Ethel W. Crocker .....	\$1,000.00	
James K. Moffitt, donation .....	1,000.00	
Library Exchange account .....	18.87	
E. A. Denicke .....	40.00	
Donation for Irish books (Knights of St. Patrick) .....	100.00	
Richardson donation .....	50.00	
Mrs. W. R. Thorsen's donation for Anatomy books .....	50.00	
	<hr/>	2,258.87

## Student Infirmary for furnishings:

M. H. Durst .....	\$100.00	
Mrs. Emma Shafter Howard .....	25.00	
	<hr/>	125.00

## For the Lick Observatory:

Wm. H. Crocker: for apparatus .....	\$1,000.00	
Wm. H. Crocker: for meteorite .....	197.80	
Estate of D. O. Mills: Southern Hemi- sphere Expedition .....	8,750.00	
	<hr/>	9,947.80

Donation by the Congregation Emanu-El for the main- tenance of School of Archaeology in Jerusalem ....	100.00
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## University Hospital in San Francisco:

Mrs. Elise Drexler, for diet kitchen .....	500.00
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<i>Carried forward</i> .....	\$24,043.93	\$1,390,124.79
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<i>Brought forward</i> .....	\$24,043.93	\$1,390,124.79
<b>Medicine:</b>		
For Laboratory of Medical Research, per A. A. D'Ancona .....	36.01	
F. B. Anderson, donation of honorarium for Weinstock Lecture .....	162.50	
Palaeontological Research: a friend .....	1,800.00	
Economics: Professor Miller, for extra salary of S. Blum .....	130.00	
<b>Zoology:</b>		
For salaries (assistance in working up results of the Agassiz Expedition to the South Seas): Professor Alexander Agassiz .....	\$600.00	
Margaret B. Fowler (Proto-zoological research) .....	300.00	
San Diego Marine Biological Laboratory Association .....	1,999.92	
		2,899.92
Miss Annie M. Alexander: for the California Museum of Vertebrate Zoology .....	11,743.63	
Donation for salary of Miss Stebbins .....	1,000.00	
<b>Carnegie Foundation for the Advancement of Teaching: Retiring allowances as follows:</b>		
G. H. Howison, Philosophy .....	\$2,875.00	
Frank Soulé, Civil Engineering .....	2,045.00	
Isaac Flagg, Greek .....	1,600.00	
A. Putzker, German .....	1,500.00	
R. H. Loughridge, Agriculture .....	1,420.00	
Mrs. Sarah F. L. Rising, widow of W. B. Rising, Chemistry .....	1,035.00	
Martha S. D. Stringham, widow of Irving Stringham, Mathematics .....	960.00	
		11,435.00
<b>Academy of Pacific Coast History:</b>		
(These gifts to the Academy were handled by the University as custodian of the funds in behalf of the Academy) .....	2,920.00	
		56,170.99
<b>Donations for erection of buildings, etc.:</b>		
Boalt Hall of Law .....	\$8,240.00	
Erection of Tennis Courts .....	238.00	
Class of 1910: Donation for erection of a bridge over Strawberry Creek .....	500.00	
Girton Hall: Women's Senior Hall .....	2,990.00	
Mrs. Hearst, for grading around the Hearst Memorial Mining Building .....	3,000.00	
		14,968.00
<i>Carried forward</i> .....		\$1,461,263.78



# INCOME

417

Brought forward ..... \$1,461,263.78

## Income for Permanent Improvements:

Permanent Improvement Fund (one-fourth of the  
three-cent tax) ..... 177,693.39

## Gifts for Endowments:

Alumni Hall Fund .....	\$200.00	
Class of 1895 Loan Fund .....	591.00	
Class of 1900 Library Fund (an increase) .....	418.50	
Class of 1911 Fund (income payable to class) .....	600.00	
Class of 1911 Loan Fund .....	400.00	
Hamerslag Loan Fund .....	6,000.00	
Albert Sidney Johnston Scholarship Fund .....	3,500.00	
Martin Kellogg Fellowship Endowment Fund .....	20,000.00	
Eugene Meyer, Jr., Library Fund .....	2,000.00	
Prytanean Fund for the Students' Infirmary .....	50.00	
	33,759.50	
		\$1,672,716.67

## Turning over of Funds:

Students' deposits: later returned or due to be re- turned .....	\$12,544.10
Military uniforms .....	11,557.00
Certified checks accompanying bids on contracts .....	106,666.68
Deposits on plans .....	840.00
Faculty Locker Room key deposits .....	9.00

## Income on Properties held in trust:

For Mrs. Jane K. Sather:	
Proportion of Endowment Pool .....	\$5,862.34
For Madame Thérèse F. Colin:	
Miscellaneous rents .....	22.75
Proportion of Endowment Pool .....	87.69
	5,972.78

## Change of form of investment:

Mortgage loans repaid and renewed .....	\$335,000.00
Collateral loans repaid and renewed .....	405,000.00
Kearney Vineyard: advances repaid .....	8,500.00
Student notes from Loan Funds .....	1,764.84
Watershed notes .....	20,000.00

## Exchange of San Francisco National Bank Stock for Bank of California Stock:

Cash .....	7,500.00
Balance of book valuation of San Francisco National Bank Stock ....	18,200.00
Gain in exchange being balance to bring up valuation of Bank of Cal- ifornia Stock .....	2,350.00

	\$798,314.84	\$137,589.56	\$1,672,716.67
Carried forward .....			

## PRESIDENT'S BIENNIAL REPORT

Brought forward .....	\$798,314.84	\$137,589.56	\$1,672,716.67
Sale of Highland Tract lots to K. H. Roulstone .....	1,600.00		
Forfeited deposit on sale of Highland Tract lots to J. S. Hanson .....	50.00		
		799,964.84	
Cash found in trunk inherited from M. Theo. Kearney ....		.10	
Sale of right of way over land at Menlo Park to Spring Valley Water Co. ....		2,824.50	
Contingent Funds (LeRoy Anderson refunded his revolving fund) .....		300.00	
			940,679.00
			<u>\$2,613.395.67</u>

## EXPENDITURES

JULY 1, 1910, TO JUNE 30, 1911

## Administration:

## Administrative salaries:

Salaries .....	\$38,387.91		
Advisors .....	2,700.00		
Janitors, Watchmen, etc. ....	28,297.50		
President's Contingent Expense allotment .....	3,000.00		
		\$72,385.41	
Repairs .....		16,951.38	
Site improvement .....		17,684.65	
Water .....		5,500.84	
Fuel (aside from oil) .....		1,588.58	
Light, Power and Heating System .....		35,537.42	
Equipment .....		3,170.52	
Telephone, Telegraph, and Expressage .....		5,119.05	
Postage .....		2,243.89	
Stationery .....		1,271.19	
Examination of schools .....		2,169.01	
Auditing .....		2,011.15	
Lectures .....		325.00	
Publications (the scientific series are included, but not administrative printing) .....		8,987.40	
Publications: Alumni Directory .....		1,342.32	
Printing Office .....		8,637.45	
			\$184,925.26

NOTE.—The cost of printing for individual departments is not included in this figure; such items have been charged to the various departments, principally as follows:

Carried forward ..... \$184,925.26

## EXPENDITURES

419

Brought forward ..... \$184,925.26

## Printing Office departmental charges:

Publications .....	\$6,672.70
Library .....	5,490.10
Summer Session .....	1,131.50
University Farm Support .....	1,121.00
Alumni Directory .....	998.25
Lick Observatory, printing .....	854.60
Imperial Valley Investigations .....	836.00
Lick Observatory, equipment .....	636.95
State Appropriation Cereal .....	561.75
Fertilizer Control .....	533.25
Dentistry .....	407.30
Medicine .....	407.00
Academy Pacific Coast History .....	375.25
Civil Engineering .....	344.75
Agricultural Experiment Station .....	317.25
Agriculture .....	315.70
Southern California Pathological Laboratory .....	314.30
Musical and Dramatic .....	248.25
Expense .....	147.00
Students' Infirmary .....	146.50
Mechanics .....	110.00
University Hospital .....	104.00
Electric Light and Power Maintenance .....	99.75
Economics .....	98.00
Butter Scoring .....	90.00
English .....	85.50
Jurisprudence .....	83.25
State Appropriation Farmers Institutes .....	81.00
Wilmerding School .....	80.75
Military Science .....	77.75
Chemistry .....	74.50
Agriculture Education .....	69.50
Geology .....	63.00
Architecture .....	52.70
Romanic Languages .....	46.00
Hygiene .....	43.50
Physiology .....	42.00
History .....	37.25
Anthropology .....	34.50
Physics .....	33.75
Political Science .....	30.00
Philosophy .....	28.50
Astronomy .....	28.00
Mathematics .....	27.25
Civil Engineering, Summer Session .....	27.00
Philosophy .....	22.80
Site .....	22.25
Insecticide and Fungicide Control .....	21.00
Adams Fund .....	21.00
Zoology .....	18.00

Carried forward ..... \$23,511.90      \$184,925.26

## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$23,511.90	\$184,925.26
Palaeontology .....	15.85	
Physical Culture .....	15.50	
University Farm—Students' deposits .....	12.00	
Botany .....	11.25	
University Farm Creamery .....	11.00	
Geography .....	11.00	
German .....	10.75	
Mining .....	10.00	
Slavic Languages .....	8.00	
Irrigation .....	9.25	
Oriental Languages .....	5.00	
Gymnasium fees .....	4.75	
Farm Dormitory .....	4.00	
Viticulture .....	3.75	
Latin .....	4.75	
Plant Diseases, Northern .....	2.20	
	<hr/>	
	\$23,650.95	
Administrative expense:		
Assistants and Stenographers in all administrative departments .....	\$27,823.47	
Charter Day Honorarium .....	\$500.00	
Charter Day expenses, including reception .....	911.05	
	<hr/>	
	1,411.05	
Traveling expenses .....	1,211.12	
Gas .....	724.89	
Rent of President's House .....	700.00	
Entertaining .....	670.18	
Rent of San Francisco office .....	660.00	
Premium on Bonds .....	585.00	
To Professor F. P. Gay, allowance for removal expenses from the East .....	500.00	
Premium on Bonds for Ordnance Stores .....	469.86	
Legal expenses .....	456.45	
Expense of Half-Hour of Music .....	339.85	
Hack and automobile hire .....	271.29	
Cost of transporting coin from Sacramento .....	235.05	
Insurance .....	224.32	
Press clippings .....	214.55	
Allowance to Dr. G. Y. Rusk for removal expenses from the East .....	200.00	
Rental of room in Stiles Hall for Department of Oriental Languages .....	200.00	
Rental of Safe Deposit boxes .....	160.00	
Rental of auxiliary fire alarm boxes at Affiliated Colleges .....	132.00	
Tuning and cartage on piano .....	123.00	
Dues for Association of American Universities .....	\$80.00	
Dues for Association of State Universities .....	10.00	
	<hr/>	
	90.00	
<i>Carried forward</i> .....	\$37,402.08	\$184,925.26

## EXPENDITURES

421

<i>Brought forward</i> .....	\$37,402.08	\$184,925.26
Exchange on Drafts .....	88.45	
Removing Law Books to Boalt Hall of Law .....	85.80	
Rental of room in Faculty Club (University guest room) .....	60.00	
Commencement Day expenses .....	60.63	
Placing and removing gates and barriers, May 24-27 .....	58.70	
Photography, blueprints, etc. ....	35.03	
Taxes on Sylvan way property .....	28.62	
Repairing clocks in Administrative Offices .....	29.00	
Illuminating Document for University of Mexico ..	25.00	
Bicycle repairs .....	15.84	
Directory Service in California Hall .....	15.00	
Miscellaneous .....	78.84	
		37,982.99
Students' Infirmary:		
Equipment and running expenses .....	\$17,162.30	
Donations for furnishings .....	131.66	
		17,293.96
Library:		
Departmental allotment:		
Salaries .....	\$22,410.61	
Expense .....	765.13	
Assistants .....	720.32	
Equipment .....	198.80	
Binding .....	5,000.00	
Books and periodicals .....	16,892.93	
Freight, Insurance, etc. ....	787.08	
		46,774.87
Robert Belcher donation .....	1.08	
Class of 1874 Library Fund, interest .....	2.18	
Class of 1902 Library Fund, interest .....	1.25	
Class of 1907 Library Fund, interest .....	78.55	
Ethel W. Crocker donation .....	446.31	
E. A. Denicke Library Fund, interest .....	29.65	
Economics 1A donation .....	10.50	
German Library donation .....	29.43	
Martha A. Hallidie donation .....	12.90	
Hutchinson donation .....	40.00	
Mrs. W. R. Thorsen donation .....	35.01	
Irish books, donation for .....	100.00	
Jucksch Fund, interest .....	65.05	
Mary Lake Memorial donation .....	43.23	
Duncan McDuffie donation .....	2.22	
James K. Moffitt donation .....	924.23	
Michael Reese Library Fund, interest .....	5,421.28	
Jane K. Sather Library Fund, interest .....	320.16	
Claus Spreckels donation .....	657.91	
Zoe, sale of .....	9.00	
		55,004.81
NOTE.—Total expended for books and periodicals, \$25,122.87.		
<i>Carried forward</i> .....		\$295,207.02



Brought forward ..... \$295,207.02

## Agriculture:

## Departmental allotment:

Agriculture .....	\$21,029.20
Bacteriology .....	500.00
Education .....	2,000.00
Entomology .....	1,200.00
Forestry .....	1,500.00

\$26,229.20

Carnegie Foundation: retiring allowance .....	1,420.00
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## United States:

Adams Fund .....	\$15,000.00
Agricultural Experiment Station (Hatch Fund) .....	15,000.00
Morrill College Aid Fund .....	18,074.68

48,074.68

Adams Fund sales .....	\$13.12
California Educational Butter Scoring Contest .....	589.00
Dairying .....	8,971.38
Fertilizer Control, exclusive of building ....	8,879.61
Cereal Sales Fund .....	1,695.10
Southern California Pathological Laboratory sales .....	1,260.74

## University Farm:

Students' deposits .....	1,749.76
Creamery .....	37,133.07
Dormitory .....	13,605.17
Poultry sales .....	566.79
Sales of produce .....	7,080.55
Stock sales .....	3,845.60
Viticultural sales .....	137.00

85,526.89

## State appropriations for Agriculture:

Cereal Investigation .....	\$6,000.00
Farmers' Institutes .....	10,158.82
Hog Cholera Serum .....	1,961.93
Imperial County Investigations .....	4,136.85
Plant Diseases, northern .....	8,578.36
Southern California Pathological Laboratory .....	19,959.02
Equipment of Laboratory at Whittier ..	622.49
Printing Publications and Circulars ....	6,000.00

## University Farm:

Equipment .....	10,244.54
Implements .....	1,058.85
Improvement of grounds .....	2,309.46
Livestock .....	4,328.29

Carried forward .....	\$75,358.61	\$161,250.77	\$295,207.02
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## EXPENDITURES

423

Brought forward ..... \$75,358.61 \$161,250.77 \$295,207.02

Salaries .....	24,504.67		
General support .....	22,292.06		
Viticulture .....	8,420.80		
		130,576.14	
			291,826.91

NOTE.—The following amounts, expended on the construction of buildings, are not included in the above figures:

Fertilizer Control Laboratory at Berkeley ..	\$425.89
University Farm: Building operations at Davis .....	27,539.49
	<u>\$27,965.38</u>

Anatomy .....	6,299.88
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## Anthropology:

Departmental allotment .....	\$7,459.88	
Mrs. Hearst's donation for salaries .....	1,680.00	
Mrs. Hearst's donation for reconstruction of Museum .....	286.29	
		<u>9,426.17</u>

Architecture .....	7,443.13
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Astronomy—Berkeley Department .....	8,719.03
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## Botany:

Departmental allotment .....	14,211.55
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Celtic .....	499.92
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## Chemistry:

Departmental allotment .....	\$27,850.06	
Morrill College Aid Fund .....	3,999.84	
Carnegie Foundation: Retiring allowance .....	1,035.00	
		<u>32,884.90</u>

## Civil Engineering:

Departmental allotment .....	\$20,068.24	
Morrill College Aid Fund .....	7,200.00	
Carnegie Foundation: Retiring allowance .....	2,045.00	
		<u>29,313.24</u>

Drawing .....	8,131.34
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## Economics:

Departmental allotment .....	\$2,401.86	
Cora Jane Flood Endowment Fund Interest .....	19,478.99	
		<u>21,880.85</u>

Education .....	16,099.92
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English .....	26,699.44
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Geography .....	4,199.95
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## Geology and Mineralogy:

Departmental allotment .....	\$12,681.32	
Palaeontology .....	5,061.60	
Donation for Palaeontological Research .....	1,676.24	
		<u>19,419.16</u>

Carried forward .....	\$792,262.41
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## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....		\$792,262.41
German:		
Departmental allotment .....	\$13,999.44	
Carnegie Foundation: Retiring allowance .....	1,500.00	
		15,499.44
Greek:		
Departmental allotment .....	\$8,319.57	
Carnegie Foundation: Retiring allowance .....	1,600.00	
		9,919.57
History .....		18,578.71
Hygiene .....		7,926.39
Irrigation .....		4,699.96
Jurisprudence .....		15,509.52
Latin .....		16,693.94
Mathematics:		
Departmental allotment .....	\$20,965.33	
Carnegie Foundation: Retiring allowance .....	960.00	
		21,925.33
Mechanics:		
Departmental allotment .....	\$15,100.97	
John W. Mackay, Jr., Endowment Fund, interest .....	4,145.68	
Morrill College Aid Fund .....	5,699.88	
		24,946.53
Military Science and Tactics .....		2,484.01
Mining:		
Departmental allotment .....	\$16,799.84	
Morrill College Aid Fund .....	4,200.00	
Donation by Mrs. Hearst, for equipment of Hearst Memorial Mining Building .....	2,520.50	
		23,520.34
Music:		
Departmental allotment .....	\$246.05	
State appropriation .....	3,000.00	
		3,246.05
Oriental Languages:		
Departmental allotment .....	\$1,546.16	
Tompkins Endowment Fund, interest .....	3,349.80	
		4,895.96
Pathology:		
Salaries .....	\$6,549.96	
Expenditures on alterations and equipment of Hygiene and Pathology Laboratory .....	1,954.76	
		8,504.72
Philosophy:		
Departmental allotment .....	\$4,180.23	
D. O. Mills Endowment Fund, interest .....	10,057.33	
Carnegie Foundation: Retiring allowance .....	2,875.00	
		17,112.56
Physical Culture .....		6,199.88
<i>Carried forward</i> .....		\$993,925.32

## EXPENDITURES

425

Brought forward ..... \$993,925.32

## Physics:

Departmental allotment .....	\$26,750.60	
Whiting Fellowships .....	1,200.00	
Morrill College Aid Fund .....	5,825.60	
		33,776.20

Physiology .....		10,366.66
Political Science .....		5,544.46
Romanic Languages .....		23,416.08
Sanskrit .....		1,699.92
Semitic Languages .....		1,999.92
Slavic Languages .....		2,023.24
University Extension .....		908.17
Vertebrate Zoology, Museum of (donation by Miss Annie M. Alexander for support) .....		11,743.63

## Zoology:

Departmental allotment .....	\$13,022.13	
Agassiz donation .....	849.92	
San Diego Marine Biological Laboratory donation (for two-thirds of Professor Ritter's salary) .....	1,999.92	
Margaret B. Fowler donation .....	80.60	
		15,952.57

## Miscellaneous:

Fire equipment .....	\$895.05	
Abstract for Sylvan way property .....	10.00	
Rewiring Affiliated Colleges .....	3,179.12	
Rewiring buildings at Berkeley .....	117.47	
Seismological apparatus .....	447.22	
Tungsten lamps .....	64.00	

## Gymnasium fees, purchases, etc., from:

Towels purchased .....	\$289.39	
Laundry .....	2,379.02	
Counting soiled towels .....	88.05	
Soap machines, repaired .....	8.60	
Soap .....	204.00	
Sanitary cabinets, repaired .....	1.40	
Copper sulphate .....	17.67	
Tennis nets and reels .....	117.25	
Gas and lights .....	4.32	
Repair Basket Ball Courts .....	28.25	
Installing Sanitary Drinking Fountains .....	10.85	
Emergency cases .....	47.02	
Moving lockers from Mining Building .....	17.25	
Cleaning filter bed, etc., at Swimming Pool .....	115.58	
Cleaning off Tennis Courts and repairs .....	750.60	
Miscellaneous (bleaching powder, water, freight, etc.) .....	12.48	
		4,091.73

(See note at top of next page.)

Carried forward ..... \$8,804.59 \$1,101,356.17

Brought forward ..... \$8,804.59 \$1,101,356.17

NOTE.—Cost of constructing Tennis Courts is to be borne by this account: The total expenditure on construction was \$11,899.94, of which \$10,545.07 has been charged to the Gymnasium Fee account, leaving an amount of \$1,354.87 to be paid out of the fees for 1911-12. There is also to be charged against the Gymnasium Fee account: Cost of construction of Swimming Tank, \$17,200; cost of construction of temporary bathhouse and equipment, \$2,734.09; so that the total expenditures to date to be charged to this account amount to \$21,288.96 (vide under Building Operations).

Bancroft Library, expense .....	\$989.00
Miscellaneous litigation expenses .....	2.40
Hitchcock Lectures .....	500.00
Making keys for Seminar Rooms .....	5.85
Weinstock Lectures .....	162.50
Removal of Library from Bacon Library to University Library .....	1,330.67
Affiliated Colleges: repairs and maintenance of grounds .....	1,514.60
Tebtunis Papyri, insurance and storage ....	22.27
State Treasurer—Refund for publications ..	26.00
University Medal .....	73.00
Short in cash .....	6.35
Express on jewelry received from the Thompson bequest .....	1.35
Commission on lease of lands at Menlo ....	105.91
Interest on overdraft with Treasurer .....	21.76
Emanu-El donation for American School of Archaeology in Jerusalem .....	100.00
	<hr/>
	\$4,861.66

13,666.25

#### Scholarships and Prizes:

State of California Scholarships .....	\$3,500.00
Bonnheim Prize .....	250.00
Bryce Historical Essay Prize .....	100.00
James M. Goewey Scholarship .....	250.00
Crystal Harford Scholarship .....	125.00
Phoebe A. Hearst Scholarships .....	2,400.00
Cornelius B. Houghton Scholarship .....	150.00
Albert Sydney Johnston Scholarship .....	175.00
Martin B. Kellogg Memorial Fellowship .....	600.00
LeConte Memorial Fellowship .....	500.00
Lincoln Scholarship .....	240.00
Professor F. V. Paget Scholarship .....	150.00
Frank M. Pixley Scholarship .....	200.00
Sheffield Sanborn Scholarships .....	750.00
Levi Strauss Scholarships .....	3,500.00

Carried forward ..... \$12,890.00 \$1,115,022.42



## EXPENDITURES

427

<i>Brought forward</i> .....	\$12,890.00	\$1,115,022.42
Willard D. Thompson Scholarships for Utah students..	3,000.00	
University Fellowships .....	3,200.00	
University Fellowships in Academy of Pacific Coast		
History from Native Sons of the Golden West .....	250.00	
Women's Christian Temperance Union Essay Prize ....	50.00	
		19,390.00

## Summer Session:

Session of 1910 .....	\$14,226.11	
Session of 1911 .....	4,780.61	
Summer School of Civil Engineering, 1910 .....	565.14	
Summer School of Civil Engineering, 1911 .....	2,327.62	
Summer School of Civil Engineering Commissary, 1910	1,368.86	
Summer School of Civil Engineering Commissary, 1911	3,555.59	
		26,823.93

NOTE.—The total net receipts of the Summer Session of 1900 were \$16,676.75 and the total expenditures \$15,062.86.

## Lick Observatory:

Departmental allotment .....	\$31,782.55
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## From gifts:

Donation for publication of E. E. Barnard's photographs .....	\$1,010.50	
Carnegie Institution .....	1,783.53	
Wm. H. Crocker Mount Whitney Expedition .....	181.41	
Wm. H. Crocker, for apparatus .....	250.00	
Wm. H. Crocker, for meteorite .....	197.80	
William Randolph Hearst, donation for earthquake recording apparatus .....	244.15	
D. O. Mills Southern Hemisphere Expedition .....	7,960.48	
	11,627.87	
		43,410.42

## Dental Department:

Running expenses .....	\$22,074.96	
Dental Library Fund .....	14.85	
		22,089.81

## Medical Department:

Running expenses .....	\$14,953.97	
Donation for Laboratory of Medical Research .....	111.70	
Los Angeles Medical Department:		
Running expenses .....	7,199.61	
University Hospital in San Francisco:		
Equipment, maintenance, etc. ....	56,714.18	
Donation by Mrs. Drexler for diet kitchen .....	326.56	
		79,306.02

*Carried forward* ..... \$1,306,042.60

<i>Brought forward</i> .....		\$1,306,042.60
Musical and Dramatic performances .....		1,321.26
Academy of Pacific Coast History .....		5,433.96
Watershed lands (purchase of lands, etc., in Strawberry Cañon) .....		465.47
Kearney Estate: Expenditures made from payment of bequest:		
Erection of cottage for Kearney Experiment Station ..		202.77
Building Operations (expenditures during the year on work in progress):		
Affiliated Colleges: fire escapes .....	\$1,236.78	
Allston way, street improvement .....	3,013.40	
Bath house and equipment at Swimming Pool (cost ultimately to be defrayed by Gymnasium fees) .....	2,734.09	
Boalt Hall of Law .....	66,777.54	
Civil Engineering Building, addition .....	1,540.81	
Civil Engineering Building, testing laboratory .....	2,672.32	
Class of 1910 donation for foot bridge over Strawberry Creek .....	73.27	
University Library Building (from the Doe bequest) .....	116,429.85	
East Hall alterations .....	1,864.97	
Fertilizer Control Laboratory, Berkeley .....	425.89	
Women's Senior Hall Building .....	65.12	
Harmon Gymnasium, repairs .....	1,600.00	
Mechanics Building, alterations .....	449.95	
Menlo: part cost of erection of building ....	173.00	
Mining Building, alterations .....	738.40	
Physiological Laboratory, alterations .....	479.60	
Sather Gateway (from Mrs. Sather's gift) ..	6,811.71	
Tennis Courts (cost ultimately to be defrayed by Gymnasium fees) .....	2,792.52	
Swimming Tank (cost ultimately to be defrayed by Gymnasium fees) .....	17,168.30	
University Farm: Building operations .....	27,539.49	
Women's Swimming Pool .....	36.89	
Potrero avenue lot: laying sidewalk .....	316.25	
Extending pipe line to Cañon Cottage .....	49.20	
Columbian Marble Bench (erected from the funds in hands of the University belonging to the Class of 1905) .....	234.90	
New roads: North of Doe Library, expended from donation by Mrs. Hearst (see also expenditures of \$18,885.94 out of Permanent Building Fund) .....	3,000.00	
		258,224.25
<i>Carried forward</i> .....	\$258,224.25	\$1,313,466.06

## EXPENDITURES

429

Brought forward ..... \$258,224.25 \$1,313,466.06

## Permanent Building Fund:

## Agriculture Hall Building: Expenditures

during year .....	\$83,304.86*	
Bacon Hall, alterations .....	41.85	
Baseball Field, grading .....	83.50	
Boalt Hall, furnishings .....	3,997.31	
California Hall, equipment .....	1,716.94	
California Hall, heating and ventilating attic .....	35.37	
New roads: California Hall to Telegraph avenue .....	5,412.41	
New roads: La Loma wagon road entrance .....	277.30	
New roads: North of new University Li- brary and from the Philosophy Building to the Hearst Memorial Mining Building .....	18,885.94	
President's House, building .....	39,727.13	
President's House, walks and roads .....	9,374.81	
President's House, furnishings .....	10,651.65	
Strawberry Cañon weir .....	65.50	
Transformers .....	736.36	
Tunnels for Electric Light and Power De- partment .....	10,014.82	
University Library furnishings, expendi- tures during year .....	74,651.74*	
	<u>\$258,977.49</u>	

517,201.74

## Wilmerding School:

Running expenses .....	\$25,329.81	
New building (under construction by boys) .....	3,326.00	
Street improvement .....	1,803.68	
	<u>30,459.49</u>	

30,459.49

## Turning over of Funds:

## Jane K. Sather Funds:

Sather Chair Fund, interest paid to Mrs. Sather .....	\$5,621.35	
Sather Law Library Fund, interest paid to Mrs. Sather .....	2,540.85	
Class of 1909 Fund—Payment to Secretary .....	75.70	
Class of 1909 Loan Fund—Payment to Secretary .....	32.02	
Class of 1910 Fund—Payment to Secretary .....	83.28	
Madame Thérèse F. Colin::		
Payments to Madame Thérèse F. Colin .....	110.98	
Taxes and insurance .....	25.00	
	<u>\$8,489.18</u>	

Carried forward ..... \$8,489.18 \$1,861,127.29

\* These are total expenditures during year. The appropriation from the Permanent Building Fund for each of these buildings was \$200,000, to be charged in annual installments of \$20,000 for each project.

## PRESIDENT'S BIENNIAL REPORT

<i>Carried forward</i> .....	\$8,489.18	\$1,861,127.29
Bills payable .....	20,000.00	
Students' deposits returned .....	13,235.01	
Military uniforms .....	11,447.80	
Certified checks accompanying bids on contracts re- turned to contractors .....	112,622.58	
Deposits on plans .....	775.00	
Bills receivable:		
Mortgage loans (consummated and re- newed) .....	\$225,000.00	
Collateral loans (consummated and re- newed) .....	50,000.00	
Kearney Vineyard: Advances account..	5,000.00	
Student notes from loan funds .....	3,031.36	
	<hr/>	283,031.36
Contingent Fund:		
E. J. Wickson, Agricultural Department	\$1,000.00	
C. H. Rieber, for Summer Session .....	150.00	
Roger M. Roberts, University Farm, Davis .....	700.00	
	<hr/>	1,850.00
Willard D. Thompson Endowment:		
Inheritance tax, redemption of taxes and recording	4,824.41	
Improvements, etc., on buildings, etc., held as invest- ments:		
Johnson Building site .....	\$252.70	
Sacramento Building site .....	80,530.43	
Highland Tract lots, Berkeley (abstract)	15.00	
Broadway Terrace lots, Oakland: Street assessment, etc. ....	2,637.27	
	<hr/>	83,435.40
Valuation of properties:		
Martin Kellogg Fellowship Endowment:		
Tonopah United Water Co. bonds....	\$20,000.00	
Bank of California stock .....	20,550.00	
	<hr/>	40,550.00
	<hr/>	580,260.74
		<hr/>
		<u>\$2,441,388.03</u>

## RECEIPTS—REVENUE ACCOUNT

YEAR ENDING JUNE 30, 1911

(This represents income from the General Fund, i.e., of moneys not restricted to special purposes.)

## State appropriations:

"Three-cent tax" (tax of 3 cents on each \$100 of assessed valuation) .....	\$529,580.16	
General support .....	100,000.00	
To reimburse income .....	8,628.50	
		\$638,208.66

Endowment Pool Income on Consolidated Perpetual Endowment .....		129,856.99
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## Students' Deposits and Fees (net):

Agriculture .....	\$370.85	
Bacteriology .....	514.25	
Botany .....	327.50	
Chemistry .....	10,893.50	
Civil Engineering .....	2,988.30	
Mechanics .....	2,265.15	
Military uniforms (accumulation of amounts not claimed) .....	167.55	
Mineralogy .....	453.25	
Mining .....	1,530.05	
Physics .....	4,919.75	
Physiology .....	59.45	
Zoology .....	1,162.35	
Zymology .....	16.10	
Changing courses .....	283.00	
Delayed registrations .....	894.00	
Non-resident .....	4,603.00	
Seminar .....	15.90	
Special examinations .....	1,645.00	
		33,108.95

Interest on note of Reinhart Lumber and Planing Mill Co. ....	\$47.94	
Less allowance in settlement .....	16.04	
		31.90
Interest on purchase of Batchelder Tract lots .....		96.48
Bear Gulch Water Co. bonds interest .....		3,750.00
Examination of schools .....		50.00
University Extension fees .....		700.00

## Sundry rents:

Cottages: Rents .....	\$2,160.31	
Less repairs .....	1,050.62	
	\$1,109.69	
Carried forward .....	\$1,109.69	\$805,802.98



## PRESIDENT'S BIENNIAL REPORT

Brought forward .....	\$1,109.69	\$805,802.98
2642 Sylvan way .....	610.00	
Such Ranch .....	425.00	
Seaman Cottage .....	50.00	
Lot 5, University Heights .....	12.00	
Potrero avenue lots .....	88.00	
Congressional land—S. B. Sumner .....	20.00	
		2,314.69
Medicine fees, etc. ....		9,455.64
Anthropology: Sale of mule .....		50.00
Chemistry: Sale of empty carboys .....		112.00
Civil Engineering: Tests .....		301.00
Dentistry:		
Accumulation of funds at June 30, 1910 .....	\$5,880.53	
Amount transferred to "Dental Endowment Fund" ....	4,329.09	
Amount retained to pay outstanding liabilities at June 30, 1910 .....	\$1,551.44	
Fees and miscellaneous receipts (net) .....	16,916.81	
		18,468.25
Dairying:		
Sale of produce .....	\$5,561.50	
Sale of cattle .....	170.47	
		5,731.97
Economics: Donation by Professor Miller for salary of S. Blum .....		130.00
Library:		
Fines .....	\$41.10	
Books .....	125.28	
Periodicals .....	17.65	
Expense .....	5.75	
Freight .....	65.58	
		255.36
Lick Observatory:		
Income on Endowment .....	\$5,728.20	
Rent: Morrow .....	80.00	
		5,808.20
Mechanics: Sale of junk .....		145.96
Military Science: Belts .....		4.09
Printing Office and Publications:		
Cash receipts for work done at Printing Office .....	\$952.10	
Sale of Publications .....	2,625.14	
Postage, binding, etc. ....	37.87	
		3,615.11
Zoology: Sale of materials .....		37.21
Reimbursement for work done, supplies, etc.:		
University Site .....	\$2,833.15	
Administration:		
Repairs .....	2,447.98	
Telephone, Telegraph and Express .....	463.49	
Salaries (Janitor) .....	251.65	
Carried forward .....	\$5,996.27	\$852,232.46

## CHARGES—REVENUE ACCOUNT

433

<i>Brought forward</i> .....	\$5,996.27	\$852,232.46
Writing letters (Appointment Secretary) .....	137.87	
Water .....	245.49	
Sale of junk .....	25.00	
Sale of wood .....	166.35	
Stationery .....	32.48	
Postage .....	8.86	
Old bicycle sold .....	2.00	
Electric Light and Power Department .....	753.84	
Copy of Patent .....	5.00	
Typewriting .....	28.90	
Miscellaneous .....	21.05	
		7,423.11
Donation for Mining Building alterations by Mrs. Hearst, balance .....		11.60
		<u>\$859,667.17</u>

## CHARGES—REVENUE ACCOUNT

YEAR ENDING JUNE 30, 1911

(This represents expenditures from the General Fund; i.e., of moneys not restricted to special purposes.)

## Agriculture:

Salaries .....	\$13,029.20	
Current expenses .....	8,000.00	
Forestry .....	1,500.00	
Entomology .....	1,200.00	
Bacteriology .....	500.00	
Education .....	2,000.00	
		\$26,229.20

## Anatomy:

Salaries .....		6,299.88
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## Anthropology:

Salaries .....	\$5,209.88	
Expenses .....	2,250.00	
		7,459.88

## Architecture:

Salaries .....	\$6,506.52	
Expenses .....	936.61	
		7,443.13

## Astronomy:

Salaries .....	\$7,699.92	
Expenses .....	1,019.11	
		8,719.03

<i>Carried forward</i> .....		<u>\$56,151.12</u>
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<i>Brought forward</i> .....		\$56,151.12
Botany:		
Salaries .....	\$10,239.90	
Expenses .....	3,971.65	
		14,211.55
Celtic: Salaries .....		499.92
Chemistry:		
Salaries .....	\$15,999.48	
Expenses .....	11,850.58	
		27,850.06
Civil Engineering:		
Salaries .....	\$11,934.84	
Expenses .....	8,133.40	
		20,068.24
Dairying:		
Salaries .....	\$1,399.92	
Expenses .....	7,571.46	
		8,971.38
Dentistry:		
Salaries .....	\$10,899.72	
Expenses (see receipts) .....	11,175.24	
		22,074.96
Drawing:		
Salaries .....	\$7,999.92	
Expenses .....	131.42	
		8,131.34
Economics:		
Salaries .....	\$1,833.24	
Expenses .....	568.62	
		2,401.86
Education:		
Salaries .....	\$15,499.92	
Expenses .....	600.00	
		16,099.92
English:		
Salaries .....	\$25,999.44	
Expenses .....	700.00	
		26,699.44
Geography:		
Salaries .....	\$3,899.88	
Expenses .....	300.07	
		4,199.95
Geology and Mineralogy:		
Salaries .....	\$11,399.88	
Expenses .....	1,281.44	
		12,681.32
German:		
Salaries .....	\$13,549.44	
Expenses .....	450.00	
		13,999.44
<i>Carried forward</i> .....		\$234,040.50

## CHARGES—REVENUE ACCOUNT

435

*Brought forward* ..... \$234,040.50

Greek:			
Salaries .....	\$8,199.96		
Expenses .....	119.61		
			8,319.57
History:			
Salaries .....	\$17,499.84		
Expenses .....	1,078.87		
			18,578.71
Hygiene:			
Salaries .....	\$6,600.00		
Expenses .....	1,326.39		
			7,926.39
Irrigation:			
Salaries .....	\$3,999.96		
Expenses .....	700.00		
			4,699.96
Jurisprudence:			
Salaries .....	\$15,209.52		
Expenses .....	300.00		
			15,509.52
Latin:			
Salaries .....	\$15,899.76		
Expenses .....	794.18		
			16,693.94
Library:			
Salaries .....	\$22,410.61		
Assistants .....	720.32		
Equipment .....	198.80		
Expense .....	765.13		
Binding .....	5,000.00		
Books .....	11,479.32		
Periodicals .....	5,413.61		
Freight, Expressage, Insurance, etc. ....	787.08		
			46,774.87
Lick Observatory (subject to income from Endowment):			
Salaries .....	\$22,559.88		
Expenses .....	6,998.00		
Adjustment of old Voucher in 1904 .....	60.00		
Purchase of books .....	1,414.67		
Printing .....	750.00		
			31,782.55
Mathematics:			
Salaries .....	\$20,011.78		
Expenses .....	953.55		
			20,965.33
Mechanics:			
Salaries .....	\$7,261.62		
Expenses (see also cash received from sale of junk) ....	7,839.35		
			15,100.97
Medicine:			
Expenditures (see also fees received .....			14,953.97
<i>Carried forward</i> .....			\$435,346.28

<i>Brought forward</i> .....		\$435,346.28
Military Science:		
Salaries .....	\$799.92	
Expenses .....	1,684.09	
(See also cash received for damage to accoutre- ments)		2,484.01
Mining:		
Salaries .....	\$11,799.84	
Expenses .....	5,000.00	
		16,799.84
Music: Expenses .....		246.05
Oriental Languages:		
Salaries .....	\$1,370.16	
Expenses .....	176.00	
		1,546.16
Palaeontology:		
Salaries .....	\$4,761.60	
Expenses .....	300.00	
		5,061.60
Pathology: Salaries .....		6,549.96
Philosophy:		
Salaries .....	\$3,017.51	
Expenses .....	1,162.72	
		4,180.23
Physical Culture:		
Salaries .....	\$5,399.88	
Expenses .....	800.00	
		6,199.88
Physics:		
Salaries .....	\$17,303.48	
Expenses .....	9,447.12	
		26,750.60
Physiology:		
Salaries .....	\$7,966.66	
Expenses .....	2,400.00	
		10,366.66
Political Science:		
Salaries .....	\$5,499.96	
Expenses .....	44.50	
		5,544.46
Printing Office:		
Salaries .....	\$2,199.96	
Expenses .....	30,088.44	
		\$32,288.40
Less work done for departments .....	23,650.95	
(See also cash receipts for work done.)		8,637.45
<i>Carried forward</i> .....		\$529,713.18



## CHARGES—REVENUE ACCOUNT

437

Brought forward ..... \$529,713.18

## Romanic Languages:

Salaries .....	\$21,916.08	
Expenses .....	1,500.00	23,416.08

Sanskrit: Salaries ..... 1,699.92

Semitic Languages: Salaries ..... 1,999.92

## Slavic Languages:

Salaries .....	\$1,999.92	
Expenses .....	23.32	2,023.24

## University Extension:

Salaries .....	\$199.92	
Expenses .....	708.25	908.17

University Site: Expenses ..... \$26,223.31

Less work done for departments ..... 8,538.66

(See also cash receipts for reimbursement for labor, etc.) ..... 17,684.65

## Zoology:

Salaries .....	\$10,849.92	
Expense (see also cash receipts for sale of materials)....	2,172.21	13,022.13

## Excess of expenditures over receipts of the University

Hospital ..... 13,195.82

## Administration:

Salaries:		
Advisors .....	\$2,700.00	
Janitors .....	28,297.50	
President's Contingent .....	3,000.00	
Administration .....	37,387.91	\$71,385.41
Fellowships .....	3,200.00	
Expenses (for details see p. 420) .....	37,982.99	

## Electric Light and Power:

Maintenance: Salaries .....	\$3,600.00	
Maintenance: Expenses .....	27,496.01	
Current repairs .....	1,469.34	
Reconstruction .....	2,972.07	
Tungsten lamps .....	64.00	
Rewiring buildings .....	117.47	35,718.89
Repairs: Expenses .....	\$39,257.60	
Less work done for departments, etc. ....	22,306.22	16,951.38

Carried forward ..... \$165,238.67      \$603,663.11

<i>Brought forward</i> .....	\$165,238.67	\$603,663.11
Water .....	\$5,500.84	
Publications .....	8,987.40	
Alumni Directory .....	1,342.32	
Equipment .....	3,170.52	
Fuel .....	1,588.58	
Telephone, Telegraph, and Expressage .....	5,119.05	
Postage .....	2,243.89	
Auditing .....	2,011.15	
Lectures .....	325.00	
Stationery .....	1,271.19	
Examination of schools .....	2,169.01	
	<u>33,728.95</u>	
(See also cash credit for work done, etc.) .....		198,967.62
Recording Bill of Sale on "Tunbridge" .....		2.40
Short in taking cash .....		6.35
Bancroft Library: Expense .....		989.00
Affiliated Colleges: Repairs and maintenance of grounds ....		1,514.60
Library removal .....		1,330.67
<b>Interest on Daily Balances:</b>		
The Endowment Pool is credited with interest, at the Endowment Pool rate for the previous half-year, on average daily balance of investment moneys on hand, which amounted:		
For the first half-year at 6.3637 per cent per annum to .....	\$3,720.36	
For the second half-year at 6.4843 per cent per annum .....	7,591.49	
	<u>\$11,311.85</u>	
Amount received from Treasurer .....	2,209.77	
		<u>9,102.08</u>
(This is equivalent to saying that the General Fund has borrowed money from the Investment Fund, paying 6.3637 per cent per annum for it for the first half-year and 6.4843 per cent per annum for the second half-year.)		
Amount credited to Mills Endowment Fund .....		5,000.00
Interest charged by Treasurer on overdraft .....		21.76
<b>Expenditures on erection of buildings, etc., during year:</b>		
Affiliated Colleges, fire escapes .....	\$1,236.78	
Affiliated Colleges, rewiring .....	3,179.12	
Allston way, improvement of street .....	3,013.40	
Civil Engineering Building, addition .....	1,540.81	
Civil Engineering Building, Testing Laboratory .....	2,672.32	
Hygiene and Pathology, laboratory equipment .....	1,954.76	
East Hall, alterations .....	1,864.97	
Harmon Gymnasium, repairs .....	1,600.00	
Mechanics Building, alterations .....	449.95	
Physiological Laboratory, alterations .....	479.60	
	<u>\$17,991.71</u>	
<i>Carried forward</i> .....		<u>\$820,597.59</u>

<i>Brought forward</i> .....	\$17,991.71	\$820,597.59
Extend pipe line to Cañon Cottage .....	49.20	
Purchase of property on Sylvan way, previously charged against Endowment as representing income produc- ing property .....	15,395.00	
Potrero avenue lots, laying sidewalk .....	316.25	
Fire equipment .....	895.05	
Seismological apparatus .....	447.22	
Women's Swimming Pool .....	36.89	
		35,131.32
		<u>\$855,728.91</u>

## SUMMARY OF REVENUE ACCOUNT

Receipts for 1910-11 .....	\$859,667.17
Charges for 1910-11 .....	855,728.91
Excess of receipts over charges .....	\$3,938.26
Balance on hand at June 30, 1910 .....	37,719.19
Balance on hand at June 30, 1911 .....	<u>\$41,657.45</u>

SCHEDULES REFERRED TO IN THE BALANCE SHEET FOR  
JUNE 30, 1911

## A. REAL ESTATE IN BERKELEY

NOTE.—Italics indicate a gift.

<i>Campus lands</i> (given by the College of California and its friends) .....	\$1,000,000.00
<i>Hearst Hall Site and Hearst Cottage Site</i> (the gift of Mrs. Phoebe A. Hearst) .....	7,000.00
Hillegass Tract .....	194,991.04
Palmer House site (on Piedmont avenue) .....	17,500.00
Watershed Lands (in Strawberry Cañon) .....	165,243.61
Sylvan way property (buildings and site) on Campus .....	15,395.00
	<u>\$1,400,129.65</u>

## B. BUILDINGS AND IMPROVEMENTS IN BERKELEY

NOTE.—Italics indicate a gift.

In active use for University purposes:

Acid House .....	\$480.00
Agricultural Building .....	7,200.00
Agriculture Hall (expenditures to June 30, 1911) .....	83,674.26
Anatomical Laboratory and Printing Office .....	6,400.00
Architectural Building .....	12,248.08
<i>Bacon Library Building</i> (for this Henry Douglass Bacon gave \$25,000) .....	55,515.74
Bacteriological Laboratory .....	480.00

Carried forward ..... \$165,998.08

<i>Brought forward</i> .....	\$165,998.08
Barns .....	2,000.00
<i>Boalt Hall of Law</i> (expenditures to June 30, 1911; for this Mrs. Boalt has given \$100,000 and the lawyers of California have subscribed \$50,000) .....	157,667.54
Botany Building .....	5,600.00
Bridge at Football Statue .....	3,384.33
Bridge at Sather Gate .....	10,922.86
<i>California Field</i> (improvements of football grounds; built by the Associated Students) .....	20,000.00
California Hall .....	271,711.33
Carpenter's Shop, building and machinery .....	4,033.19
Cement sidewalks .....	596.25
Chemistry Building .....	81,000.00
<i>Cinder Path</i> (old athletic track; built by the Associated Students) ..	1,000.00
Civil Engineering Hall .....	38,582.61
Civil Engineering Laboratory .....	2,400.00
Civil Engineering Testing Laboratory (expenditures to June 30, 1911) .....	2,672.32
Conservatory .....	10,800.00
Dairy Barn .....	2,400.00
Dairy Milk House, equipment, etc. ....	4,160.60
Manure Pit .....	1,031.15
East Hall .....	16,000.00
Entomological Laboratory .....	2,569.99
<i>Faculty Club</i> (built by the Faculty Club) .....	12,000.00
Fertilizer Control Laboratory .....	14,615.29
<i>Greek Theatre</i> (the gift of William Randolph Hearst) .....	45,000.00
<i>Harmon Gymnasium</i> (the original building was the gift of A. K. P. Harmon) .....	50,181.89
<i>Hearst Hall</i> (the gift of Mrs. Phoebe A. Hearst) .....	35,978.30
<i>Hearst Memorial Mining Building</i> (the gift of Mrs. Phoebe A. Hearst, as a memorial to her husband, Senator George Hearst) ..	644,400.00
Hog pens, etc., Strawberry Cañon .....	437.00
Hygiene and Pathology Laboratory .....	24,940.02
Landscape Gardening (grading, walls, etc.) .....	3,118.85
Mechanics Building .....	61,025.00
<i>John Mitchell Monument</i> (erected by the University Cadets) .....	358.95
<i>Museum Building, Archaeology</i> (the gift of Mrs. Phoebe A. Hearst) ..	3,667.77
New permanent roads .....	47,890.74
North Hall .....	20,000.00
Philosophy Building .....	8,000.00
Plant houses .....	957.00
Platform scales .....	350.00
Power, Light, and Heat Plant .....	\$73,421.29
Workshop for Electric Light and Power Department .....	1,040.40
Electric construction on Campus .....	8,533.59
Heating system (exclusive of Central Station) .....	41,967.43
	124,962.71
President's House: Building (expenditures to June 30, 1911) .....	111,098.22
President's House: Walks and roads (expenditures to June 30, 1911) .....	9,374.81
<i>Carried forward</i> .....	\$2,022,886.80

*Brought forward* ..... \$2,022,886.80

Rifle Range .....	501.90
<i>Sather Gateway</i> (expenditures to June 30, 1911; from gift of Mrs. Jane K. Sather) .....	32,128.09
<i>Senior Hall</i> (given by the Order of the Golden Bear) .....	4,676.98
Shops (carpenter, painter, etc.) .....	1,200.00
South Hall .....	126,000.00
<i>Rudolph Spreckels Temporary Physiological Laboratory</i> (the gift of Rudolph Spreckels) .....	25,000.00
Store house .....	635.53
Strawberry Cañon weir .....	569.80
Students' Infirmary .....	16,084.96
Students' Observatory .....	8,000.00
<i>Swimming Tank</i> (built from the Students' Gymnasium fees; expenditures to June 30, 1911) .....	17,200.00
<i>Tennis Courts</i> (built from the Students' Gymnasium fees; expenditures to June 30, 1911) .....	21,970.89
Trunk Sewer .....	6,356.10
<i>University Library</i> (expenditures to June 30, 1911; built out of the Charles Franklin Doe bequest, amounting at June 30, 1911, to \$740,402.41) .....	672,338.38
Viticultural Laboratory .....	400.00
<i>Zoology, California Museum of Vertebrate</i> (Miss Annie M. Alexander gave half the cost) .....	14,703.45
	<hr/>
	\$2,970,652.88

**Dwellings rented:**

<i>Hearst Cottage</i> , College avenue (given by Mrs. Phoebe A. Hearst) .....	\$2,750.00
Palmer House (Piedmont avenue) .....	2,500.00
University Cottages (Allston way) .....	9,600.00
	<hr/>
	14,850.00
	<hr/>
	\$2,985,502.88

**C. REAL ESTATE AND IMPROVEMENTS NOT IN BERKELEY**

**Utilized for University purposes:**

**San Francisco:**

Affiliated Colleges (the land was given by Adolph Sutro) .....	\$405,707.74
<i>San Francisco Institute of Art</i> (the gift of Edward F. Searics) .....	235,150.00

**Wilmerding School:**

New building .....	\$42,466.87
Old building .....	24,906.46
Real estate .....	58,293.80
	<hr/>
	125,667.13
	<hr/>
	766,524.87

*Carried forward* ..... \$766,524.87



<i>Brought forward</i> .....		\$766,524.87
<b>Lick Observatory:</b>		
<i>Lands, buildings and equipment</i> .....	\$610,000.00	
Holden Tract .....	511.25	
Cook Tract .....	960.00	
Hartzoke Tract .....	262.73	
Duckworth Tract .....	316.42	
Electric Light and Power Plant .....	11,606.23	
Photographic vault .....	19,834.70	
Tank .....	2,701.00	
Barn .....	1,254.95	
		<u>647,447.28</u>
<b>Pacific Grove:</b>		
<i>Real estate of Herzstein Seaside Laboratory</i> (given by Dr. M. Herzstein) .....		2,500.00
<b>Davis (University Farm):</b>		
Lands .....	\$103,290.00	
Water right .....	3,895.53	
Dairy Building and Livestock Pavilion .....	\$32,303.73	
Cottages nos. 1 and 2 .....	7,951.45	
Workshops .....	6,529.50	
Seed house .....	3,913.00	
Sewerage and water systems .....	17,779.00	
Dining Room Building .....	12,606.45	
Dormitory .....	28,000.00	
Sheep Barn .....	4,530.00	
Horse Barn .....	6,880.00	
Horticultural Building .....	19,163.00	
Dairy Barn .....	17,338.00	
Silo .....	1,537.50	
Veterinary Science Building .....	7,600.00	
Office building .....	6,907.00	
Miscellaneous .....	39,677.95	
		<u>212,716.58</u>
		319,902.11
<b>Southern California Pathological Laboratory:</b>		
Buildings at Riverside .....	\$4,000.00	
Buildings at Whittier .....	7,856.36	
		<u>11,856.36</u>
<i>Kearney Estate</i> (5400 acres near Fresno, bequeathed by M. Theo. Kearney) .....		1,000,000.00
<i>Los Angeles Medical Departemnt</i> ; Lands, buildings and equipment (given by the Los Angeles College Clinic Association) .....		100,000.00
		<u>\$2,848,230.62</u>
<i>Carried forward</i> .....		

Brought forward ..... \$2,848,230.62

Other Real Estate:

Congressional lands*	\$11,818.27	
Public Building lands†	800.00	
Potrero avenue lots (originally bought for the Medical Department)	10,364.39	
		22,982.66
		<u>\$2,871,213.28</u>

D. INVESTMENTS

Bills Receivable, Bonds, Stocks, and Real Estate

Bills Receivable:

Mortgage loans	\$1,355,000.00	
Collateral loans	90,000.00	
Kearney Vineyard Co.: Advance account	2,500.00	
J. B. Reinstein (note as donation for University Hospital)	1,000.00	
Loans from the Class of 1886 Loan Fund	2,163.08	
Loans from the Class of 1895 Loan Fund	335.00	
Loans from the Class of 1903 Loan Fund	1,059.63	
Loans from the Class of 1909 Loan Fund	1,128.78	
Loans from the Grubstake "W" Loan Fund	361.30	
Loans from the Medal Loan Fund	283.90	
Loans from the Walton Memorial Loan Fund	744.00	
		\$1,454,575.69
Notes given in part payment of purchase price of Water-shed lands—purchased under discount		19,840.44

Bonds:

Bear Gulch Water Co. (par value \$164,000)	\$164,000.00	
Montgomery avenue bonds (par value \$22,000)	1.00	
Tonopah United Water Co. (par value \$20,000)	20,000.00	
State Treasurer (vide Cal. Stats. 1899-93)	751,000.00	
State Treasurer: Diverted Funds (vide Cal. Stats. 1899-93)	79,750.00	
Pacific Gas and Electric Co. (par value \$2,000)	1,600.00	
Oakland Traction Consolidated (par value \$15,000)	14,662.50	
Sacramento Electric Gas and Railway Co. (par value \$1,000)	1,020.00	
Southern Pacific Railroad 1st Refunding 4 per cent Gold Bonds (par value \$33,000)	32,937.50	
		1,064,971.00
Carried forward		\$2,539,387.13

\* This is 3954.47 acres of land still on hand from the original grant of 150,000 acres; all have once been sold, but these have come back to the University by foreclosure or cancellation of contracts.

† This is 320 acres of land still on hand from the original grant of 6,400 acres; all have once been sold, etc.

Brought forward ..... \$2,539,387.13

Stocks:

Weinstock-Lubin Real Estate Co. (500 shares preferred, par value \$5,000) .....	\$5,000.00
Firemen's Fund Insurance Co. (100 shares common, par value \$10,000) .....	21,000.00
Sather Banking Co. and San Francisco National Bank (200 shares Sather Banking Co. common stock, par value \$2,800) .....	2,800.00
Bank of California (100 shares common, par value \$10,000) .....	20,550.00
Mackay Companies (704 shares preferred, par value \$70,400) .....	50,000.00
Kennedy Mining and Milling Co.* (1200 shares com- mon, par value \$120,000) .....	1.00
University Land and Improvement Co., Cloyne Court Court (2500 shares common, par value \$2,500) .....	2,500.00
Stocks, Notes, and Mining Claims (Thompson Fund) ...	1.00
	<hr/>
	101,852.00

Real Estate and Improvements:

Real estate in West Berkeley (4 lots on Sixth street)....	\$2,083.11
Real estate in Escondido (76 acres) .....	2,000.00
Real estate in Menlo (1390 acres) .....	20,763.25
Real estate in Oakland (Broadway Terrace lots) .....	45,161.25
Real estate in Oceanside (75 x 100 feet) .....	1,800.00
Real estate in Redlands .....	5,714.10

Real Estate in San Francisco:

Johnson Building site .....	\$400,000.00
Sacramento Building site .....	200,000.00
Johnson Building reconstruction .....	1,536.20
Sacramento Building reconstruction .....	92,106.84
	<hr/>
	693,643.04
Real estate on Dearborn street, Chicago (Thompson bequest) .....	\$50,000.00
Real estate in Salt Lake City (Lot 6, Block 12, Plot E) .....	3,500.00
	<hr/>
	824,664.75
Balance of contract for sale of 80 feet on Eunice street, North Berkeley, to Katherine H. Roulstone .....	1,100.00
	<hr/>
	<u>\$3,467,003.88</u>

NOTE.—The University of California also holds \$400,000 stock of the Bear Gulch Water Company not valued on the books.

\* These stocks were received in April, 1907, as part of the distribution of the Doe Estate. They were valued at \$6,000, and dividends as received were credited to this valuation.

E. DEPARTMENTAL ACCOUNTS AND OTHER EXPENDITURES CARRIED  
FORWARD TO YEAR 1911-12

Store account .....	\$355.53
Agriculture .....	98.78
Agriculture: Bacteriology .....	40.13
Agriculture: Education .....	51.09
Agriculture: Entomology .....	28.94
Anthropology .....	11.00
Civil Engineering .....	327.16
Education .....	28.30
Electric Light and Power: General construction .....	8,997.61
English .....	12.09
Geology and Mineralogy .....	422.91
German .....	4.89
Irrigation .....	26.75
Jurisprudence .....	11.87
Library .....	2,887.80
Library, Bancroft Cataloguing .....	100.00
Lick Observatory .....	313.20
Lick Observatory, printing .....	609.22
Military Science and Tactics .....	13.93
Mining .....	215.50
Physical Culture .....	5.72
Physiology .....	333.27
Printing Office .....	716.80
Publications .....	100.00
Repairs .....	1,322.80
Romanic Languages .....	95.74
Site .....	1,022.85
Zoology .....	199.37
Summer Session: Civil Engineering .....	3,052.56
Agricultural Experiment Station Sales Fund .....	1,082.97
Cereal sales .....	190.14
Forestry sales .....	115.15
Southern California Pathological Laboratory, Sales Fund .....	843.09
University Farm: Dormitory account .....	1,563.41
Student Infirmary: Excess of expenditures for building alterations, equip- ment and maintenance over receipts to date .....	822.55
Excess of expenditures for buildings, etc., to be made good ultimately from receipts of Gymnasium Fee:	
Tennis Courts .....	\$1,354.87
Swimming Tank .....	17,168.30
Bath House and equipment .....	2,734.09
	<hr/>
	21,257.26
Amounts advanced under State appropriations for 1911-13:	
Insecticide and Fungicide Control .....	21.00
Cereal Investigations .....	25.00
University Farm: Buildings .....	1,153.73
University Farm: Livestock .....	2,693.52
Viticulture Investigations .....	12.85
	<hr/>
Carried forward .....	\$51,186.48

<i>Brought forward</i> .....	\$51,186.48
Civil Engineering Building alterations, provided for in budget of 1911-12 .....	71.55
Expenditures on the erection and furnishing of buildings paid out of Permanent Building Fund moneys; to be made good by charges against that fund in annual installments of \$20,000 for each enterprise:	
Doe Library, furnishing and equipment .....	\$34,651.74
Agriculture Hall, erection of building .....	43,674.26
	<hr/> 78,326.00
There is also an amount of \$125,243.61 for expenditures on purchase of Watershed Lands, to be charged to Permanent Building Fund in annual installments of \$20,000.	

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\$129,584.03

#### F. AMOUNTS DUE FROM THE STATE OF CALIFORNIA UNDER VARIOUS APPROPRIATIONS

Three-cent tax .....	\$89,828.20
Reimbursement of income .....	15,500.00
General Support .....	8,333.37
Chair of Music .....	500.00
Imperial County Investigations .....	825.58
Plant Diseases, Northern .....	2,388.71
Southern California Pathological Laboratory .....	2,177.12
Southern California Pathological Laboratory equipment .....	116.20
University Farm: Equipment .....	81.38
University Farm: Improvements of grounds .....	616.70
University Farm: Livestock .....	1,826.48
University Farm: Salaries .....	4,041.28
University Farm: Support .....	6,283.09
Viticulture .....	1,566.94
Hog Cholera Serum .....	1,961.93
	<hr/> \$136,046.98

#### G. SUSPENSE ACCOUNT

Turner mortgage (case under litigation) .....	\$47,000.00
Excess of expenditure over amount provided under State appropriation for University Farm for 1907-09 (Legislature of 1911 made appropriation for this) .....	12,289.37
	<hr/> \$59,289.37

#### H. ENDOWMENT FUND ACCOUNTS

	Income for 1910-11	Balance June 30, 1911
Alumni Association: Life Membership Fund (income for use of Alumni Association) .....	\$215.37	\$3,545.40
Alumni Hall Fund (gifts from Alumni for building a Student Club House) .....	515.03	8,628.16
Class of 1874 Library Fund .....	3.37	52.91
Class of 1886 Loan Fund .....	276.69	4,298.39
	<hr/>	<hr/>
<i>Carried forward</i> .....	\$1,010.46	\$16,524.86



	Income for 1910-11	Balance June 30, 1911
<i>Brought forward</i> .....	\$1,010.46	\$16,524.86
Class of 1895 Loan Fund .....	12.30	603.30
Class of 1897 Library Fund .....	6.69	105.08
Class of 1900 Library Fund .....	25.73	568.50
Class of 1902 Library Fund .....	7.95	125.00
Class of 1903 Loan Fund .....	53.84	1,063.67
Class of 1905 Fund (to be spent on a memorial bench and chair) .....	27.31	282.79
Class of 1907 Permanent Endowment Fund (income for the purchase of books) .....	31.82	500.00
Class of 1907 Permanent Endowment Fund (income for the benefit of the class) .....	9.54	150.00
Class of 1908 Fund (income for the benefit of the class) .....	14.67	241.67
Class of 1909 Endowment Fund (income for the benefit of the class) .....	38.17	600.00
Class of 1909 Loan Fund (income for the benefit of the class) .....	25.01	1,200.00
Class of 1910 Endowment Fund (income for the benefit of the class) .....	85.91	1,350.00
Class of 1911 Endowment Fund (income for the benefit of the class) .....	2.90	600.00
Class of 1911 Loan Fund .....	1.93	401.93
P. Charles Cole Scholarship Fund .....	129.38	2,130.69
Thérèse F. Colin European Fellowship Fund (given by Professor Thérèse F. Colin for European study in French) .....	110.44	10,961.94
Consolidated Perpetual Endowment Fund (sale of lands under Federal and State Grants, savings of income, etc.) .....	129,856.99	2,062,692.18
Emily Chamberlain Cook Prize Fund (given by Professor Albert S. Cook as a memorial to his wife, for an an- nual prize for a poem) .....	67.00	1,069.84
E. A. Denicke Library Fund (given by former Regent Ernst A. Denicke) .....	63.63	1,000.00
Dental Endowment Fund .....	279.86	4,608.95
Doe Library Fund (bequeathed by Chas. Franklin Doe, subject to expenditures for building up to June 30, 1911, of \$672,338.38) .....	10,359.25	740,402.41
Doe Library Completion and Equipment Fund (set aside out of Permanent Building Fund moneys) .....	812.80	20,971.89
Cora Jane Flood Endowment Fund (gift of Miss Flood for the College of Commerce) .....	29,699.37	336,300.36
James M. Goewey Scholarship Fund .....	286.99	4,510.00
Grubstake "W" Loan Fund (given by anonymous friend) .....	5.15	361.69
Hamerslag Loan Fund (income only to be used for loans to students) .....	373.34	6,000.00
Charles M. Hitchcock Endowment Fund (for lectures upon scientific and practical subjects) .....	636.34	10,000.00
Cornelius B. Houghton Scholarship Fund .....	190.91	3,000.00
Albert Sidney Johnston Memorial Scholarship Fund .....	191.26	3,500.00
<i>Carried forward</i> .....	\$174,416.94	\$3,231,826.75

	Income for 1910-11	Balance June 30, 1911
<i>Brought forward</i> .....	\$174,416.94	\$3,231,826.75
Jucksch donation (gift of Mary Jucksch; the income is used for purchase of books in American History) .....	61.33	600.00
Kearney Bequest* (cash) .....		831.57
Martin Kellogg Fellowships Endowment Fund (given by Mrs. Martin Kellogg for fellowships at the Lick Ob- servatory) .....	600.00	20,000.00
Leona Lebus Endowment Fund (given by Mrs. Martha C. Lebus, in fulfillment of the will of her daughter, Miss Leona Lebus; the income is for the care at the Univer- sity of California Hospital of chronic cases, preferably non-residents of San Francisco) .....	254.54	4,000.00
LeConte Memorial Fellowship Fund (given by the Alumni Association in memory of John and Joseph LeConte) .....	638.03	10,026.47
Lick Observatory Fund (balance remaining of the bequest of James Lick after erection and equipment of the Observatory) .....	5,808.20	90,018.16
John W. Mackay, Jr., Endowment Fund (given half by Mrs. John W. Mackay and half by Clarence Hunger- ford Mackay as an endowment for electrical engi- neering) .....	6,363.38	100,000.00
Massachusetts Relief Fund (moneys given by the citizens of Massachusetts for relief after the San Francisco fire of 1906, and, by their request, granted by the San Francisco Relief and Red Cross funds for the endowment of the University of California Hospital)....	6,363.38	100,000.00
Medal Loan Fund (proceeds from the sale of University medals refused by Joseph B. Garber, class of 1892; Miss Katherine Felton, class of 1895; and Mr. Arthur M. Seymour, class of 1891, the medalists of their respective classes) .....	5.89	284.12
Men's Dormitory Fund (given by the students, etc.) .....	22.31	367.47
Eugene Meyer, Jr., Library Endowment Fund for his- torical books) .....	41.73	2,000.00
D. O. Mills Endowment Fund (given by D. O. Mills for the endowment of a Professorship of Intellectual and Moral Philosophy and Civil Polity) .....	10,057.33	158,050.08
Paget Scholarship Fund (bequeathed by Mme. Emmanuel Marie Paget for the Professor F. V. Paget Scholarship for a student in French) .....	191.48	3,009.09
Philo Sherman Bennett Prize Fund (given by Wm. Jen- nings Bryan, for an essay on the Principles of Free Government) .....	32.47	542.72
Frank M. Pixley Scholarship Fund (bequeathed by Amelia V. R. Pixley for a scholarship for a student in law)....	226.75	3,563.22
<i>Carried forward</i> .....	\$205,083.76	\$3,725,119.65

\* \$25,000 was received in cash from the distribution of the M. Theo. Kearney Estate. Certain claims, etc., against the estate have been liquidated out of this amount. Whatever balance has been in this fund has been loaned to the Kearney Vineyard with-  
out interest.

	Income for 1910-11	Balance June 30, 1911
<i>Brought forward</i> .....	\$205,083.76	\$3,725,119.65
Prytanean Hospital Fund (gift by Prytanean Society for the equipment of the Student Infirmary) .....	41.29	718.19
Michael Reese Library Fund (gift of Michael Reese, income used for purchase of books) .....	3,181.70	50,000.00
Richardson Latin Translation Prize Fund (bequeathed by Professor George Morey Richardson, income for prize in Latin translation) .....	11.20	1,600.00
Hermann Royer Endowment Fund (bequeathed by Hermann Royer for founding a professorship in Political Economy) .....	222.21	3,659.37
Sheffield Sanborn Scholarship Fund (given by Mrs. James Horsburgh, Jr., to endow one scholarship in medicine and one in law at Berkeley and one in law at the Hastings College of Law) .....	954.51	15,000.00
Jane K. Sather Chair Fund (the gift of Mrs. Jane K. Sather for the endowment of a chair of Classical Literature) .....	4,327.35	70,805.00
Jane K. Sather Law Library Fund (the gift of Mrs. Jane K. Sather; income to be devoted to support a law library) .....	1,534.99	24,122.35
Jane K. Sather Library Fund (the gift of Mrs. Jane K. Sather; income to be devoted to support a law library) .....	636.34	10,000.00
Willard D. Thompson Memorial Scholarship Fund (the gift of Mrs. Jennie D. Thompson, as a memorial to her son, Willard D. Thompson, '94, the income to be used for scholarships for students from the State of Utah) .....	3,098.86	51,725.73
Edward Tompkins Endowment Fund (the gift of Edward Tompkins for the foundation of the Agassiz Professorship of Oriental Languages and Literature) .....	3,349.80	87,572.45
University Hospital Endowment Fund .....	41.33	649.68
University Hospital Endowment Fund (J. B. Reinstein) .....		1,000.00
University Hospital Endowment Fund (given by the San Francisco Maternity) .....	636.34	10,000.00
University Medal Fund (given by friends of the University of California; the income to be used to give a medal to the most distinguished scholar of each year) .....	247.91	3,896.00
Veltin Endowment Fund (given by students of the Veltin School; the income to be used for the Student Infirmary) .....	50.91	800.00
Frank J. Walton Memorial Loan Fund (given by the Class of 1883 as a memorial to their classmate; the income only from this fund is to be loaned to students; when the fund shall exceed the sum of \$20,000 scholarships at Berkeley may be established out of the surplus) .....	322.49	5,722.07
Barbara Weinstock Lectureship Fund (the gift of Colonel H. Weinstock, in memory of his mother, for an annual lecture on "The Morals of Trade") .....	325.00	5,000.00
<i>Carried forward</i> .....	\$224,065.99	\$4,067,390.49

	Income for 1910-11	Balance June 30, 1911
<i>Brought forward</i> .....	\$224,065.99	\$4,067,390.49
Whiting Fund (bequeathed by Professor Harold Whiting; the income to be expended for the benefit of the De- partment of Physics) .....	1,431.74	22,500.00
J. Clute Wilmerding Endowment Fund (bequeathed by J. Clute Wilmerding for the establishment and endow- ment of the Wilmerding School of Industrial Arts) ....	29,584.03	449,000.00
	<u>\$255,081.76</u>	<u>\$4,538,890.49</u>

NOTE.—The relation between the total endowments and the total investments as appearing in the balance sheet is shown as follows:

Investments .....	\$3,467,003.88	
Loss on Montgomery avenue bonds (litigation now in progress to recover this amount) .....	21,999.00	
Expended to June 30, 1911, on the new University Li- brary Building from the Doe bequest .....	672,338.38	
Endowment Fund moneys loaned at interest to the Perma- nent Building Fund .....	195,746.52	
Endowment Fund moneys loaned at interest to the Gen- eral Fund .....	254,626.42	
	<u>\$4,538,890.49</u>	\$4,611,714.20
Endowment Funds .....	\$4,538,890.49	
Gains in Endowment Pool Investments .....	72,823.71	
	<u>4,611,714.20</u>	

#### I. BALANCES ON HAND IN FUND INTEREST ACCOUNTS, WHICH ARE USED FOR SPECIFIC PURPOSES

Class of 1874 Library Fund .....	\$12.00
Class of 1897 Library Fund .....	29.06
Class of 1900 Library Fund .....	33.70
Class of 1902 Library Fund .....	26.44
Class of 1907 Permanent Endowment Fund (for the purchase of books)	9.23
Emily Chamberlain Cook Prize Fund .....	50.00
E. A. Denicke Library Fund .....	118.30
*Cora Jane Flood Endowment Fund .....	9,941.47
James M. Goewey Scholarship Fund .....	394.32
Hamerslag Loan Fund .....	373.34
Charles M. Hitchcock Endowment Fund .....	950.39
Cornelius B. Houghton Scholarship Fund .....	369.93
Albert Sidney Johnston Memorial Scholarship Fund .....	16.26
Jucksch Endowment Fund .....	30.20
LeConte Memorial Fellowship Fund .....	481.02
John W. Mackay, Jr., Endowment Fund .....	7,956.19
Eugene Meyer, Jr., Library Fund .....	41.73
Professor F. V. Paget Scholarship Fund .....	140.98
Frank M. Pixley Scholarship Fund .....	115.46
<i>Carried forward</i> .....	<u>\$21,090.02</u>

\* To be added to the Principal of Funds.



<i>Brought forward</i> .....	\$21,090.02
Michael Reese Library Fund .....	373.93
Richardson Latin Translation Prize Fund .....	11.20
Sheffield Sanborn Scholarship Fund .....	423.37
Jane K. Sather Library Fund .....	1,048.62
Willard D. Thompson Memorial Fund .....	2,918.86
University Medal Fund .....	720.54
Veltin Endowment Fund .....	209.50
Barbara Weinstock Lectureship Fund .....	1,528.41
Whiting Fund .....	2,291.04
J. Clute Wilmerding Endowment Fund .....	8,606.66
	<hr/>
	\$39,222.15

## J. BALANCES ON HAND IN DONATION ACCOUNTS

Agassiz donation .....	\$97.30
Belladonna Research, donation for .....	75.00
Boalt Hall of Law, donations for building (this is subject to expenditures for the erection of building, which has cost up to June 30, 1911, \$157,667.54) .....	97,110.80
Bonnheim Prize .....	105.00
Carnegie Institution, donation for Lick Observatory .....	1,237.47
Class of 1910, donation for bridge over Strawberry Creek .....	1,419.23
Ethel W. Crocker, donation for Mexican Archaeological Research .....	1,037.66
Ethel W. Crocker, donation for Physiological books .....	734.87
William H. Crocker, donation to Lick Observatory for apparatus .....	750.00
Dental Department Library Fund .....	17.70
Margaret B. Fowler, donation for Zoology .....	294.40
Girton Hall, donations for .....	2,924.88
Gown Fund (for purchase of a President's academic gown) .....	84.77
Greek Theatre, donations for marble chairs .....	292.66
Mrs. Hearst, donation for publications .....	1,000.00
William Randolph Hearst, donation to Lick Observatory for earthquake apparatus .....	9.53
Dr. M. Herzstein, donation for Physiological Laboratory .....	775.76
E. C. Hutchinson, donation for books .....	60.00
Mary Lake Memorial, donation for books .....	621.77
Lick Observatory, donation for publication of Dr. E. E. Barnard's photographs .....	1,214.50
D. O. Mills, donation to Lick Observatory for Southern Hemisphere Expedition .....	3,232.65
James K. Moffitt, donation for books .....	402.03
Palaeontology, donation by a friend .....	57.85
Richardson donation for books .....	50.00
Sather Gateway donation, balance on hand .....	7,554.41
Scholarship for Tracy Crane .....	125.00
Spinello Library donation .....	46.91
Claus Spreckels, donation for books .....	668.49
Levi Strauss Scholarships .....	62.50
Student Infirmary, donations for .....	691.31
	<hr/>
<i>Carried forward</i> .....	\$122,754.45



<i>Brought forward</i> .....	\$122,754.45
Tennis Courts, donations for building of new .....	238.00
Caroline Thorsen, donation for Anatomy books .....	14.99
University Fellowship in Academy of Pacific Coast History, donation by Native Sons of the Golden West .....	500.00
University Hospital, donation for diet kitchen of .....	173.44
	<hr/>
	\$123,680.88
	<hr/>

## K. BALANCES ON HAND TO BE USED FOR SPECIFIC PURPOSES

Library Exchange .....	\$64.69
Adams Fund—Sales .....	82.04
California Educational Butter Scoring Contest .....	184.53
Fertilizer Control .....	6,304.86
Fungicide and Insecticide Control—Registrations .....	1.00
Poultry Experiment Station—Sales Fund .....	192.58
University Farm: Creamery sales .....	2,239.47
University Farm: Poultry sales .....	509.35
University Farm: Sales Fund .....	1,657.83
University Farm: Stock Sales Fund .....	1,245.90
University Farm: Students' deposits .....	684.49
University Farm: Veterinary sales .....	44.75
Sale of a brief account of Lick Observatory .....	516.46
Sale of Keeler Volume .....	131.85
Sale of Miss Shinn's Pamphlet .....	110.96
Sale of Tebtunis Papyri .....	351.72
Sale of Zoe .....	25.57
Music and Dramatic events .....	1,664.57
State Appropriation: Affiliated Colleges (improvement of grounds) .....	326.95
Summer Session Fees:	
*Summer Session .....	\$21,186.53
Home Economics .....	185.00
Manual Training .....	93.00
Psychology .....	2.00
	<hr/>
	21,466.53
	<hr/>
	\$37,806.10
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## L. SUNDRY CREDITORS

Sundry Vouchers (bills approved for payment) .....	\$102,429.19
Treasurer's Advances (bills already paid by Treasurer's advance checks) .....	65,693.96
Mrs. Jane K. Sather:	
Sather Chair Fund Interest .....	\$122.56
Sather Law Library Fund Interest .....	2.90
	<hr/>
	125.46
Mrs. Thérèse F. Colin, European Fellowship Interest .....	4.19
Rents paid in advance .....	559.39
	<hr/>
<i>Carried forward</i> .....	\$168,812.19

\* In addition to these certain fees will be retained from Chemistry and Physics.

<i>Brought forward</i> .....	\$168,812.19
Deposits on plans .....	85.00
Deposit on Faculty shower keys .....	8.50
Certified checks accompanying bids, returnable to contractors .....	395.00
Sundry Creditors .....	1,572.75
Students' Deposits:	
Agriculture .....	\$74.95
Bacteriology .....	55.40
Botany .....	3.75
†Chemistry .....	2,375.96
Civil Engineering .....	49.00
Dairy .....	17.00
Diplomas .....	4,257.10
Histology .....	5.00
Key rental .....	5.00
Library .....	640.00
Mechanics .....	323.25
Mineralogy .....	3.00
Mining .....	153.44
†Physics .....	992.95
Physiology .....	30.10
Zoology .....	159.20
Summer Session: Civil Engineering Commissary Account..	1,247.73
Zymology .....	14.45
	10,407.28
Class of 1907 Permanent Endowment Fund Interest (payable to permanent Secretary of class) .....	31.39
Class of 1909 Permanent Endowment Fund Interest (payable to permanent Secretary of class) .....	3.39
Class of 1910 Permanent Endowment Fund Interest (payable to permanent Secretary of class) .....	7.14
Class of 1911 Permanent Endowment Fund Interest (payable to permanent Secretary of class) .....	2.90
	<u>\$181,325.54</u>

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† Some portion of these will be ultimately credited to Summer Session.

UNIVERSITY OF CALIFORNIA—BALANCE SHEET, JUNE 30, 1911  
*Letters refer to Preceding Schedules*

ASSETS		LIABILITIES	
Real Estate and Improvements:		University of California (representing University property in general other than that held for investment purposes) .....	\$7,821,769.37
A.—Real Estate in Berkeley .....	\$1,400,129.65	H.—Endowment Fund Accounts .....	4,538,890.49
B.—Buildings and Improvements in Berkeley .....	2,985,502.88	I.—Fund Interest Accounts: Balances on hand of the income of endowments .....	39,222.15
C.—Real Estate and Improvements not in Berkeley .....	2,871,213.28	J.—Donation Accounts: Unexpended balances of donations .....	123,680.88
D.—Investments:		K.—Balances on hand restricted to use for specific purposes .....	37,806.10
Bills Receivable .....	\$1,454,575.69	L.—Sundry Creditors .....	181,325.54
Notes (Regents' own watershed notes bought in) .....	19,840.44	Bills payable: Watershed lands .....	20,000.00
Bonds .....	1,064,971.00	Losses and gains in Endowment Pool investments (increase in the valuation of properties in which Endowment Pool moneys have been invested) .....	72,823.71
Stocks .....	101,852.00	Revenue (surplus in General Fund, June 30, 1911) .....	41,657.45
Real Estate and Improvements held as investments .....	824,664.75		
Contract for sale of lands .....	1,100.00		
See note at foot of page 450 as to relation between endowments and investments.	3,467,003.88		
E.—Departmental accounts and other expenditures carried forward as a charge against 1911-1912 .....	129,584.03		
F.—Amounts due from the State of California under various appropriations .....	136,046.98		
Permanent Building Fund (expenditures carried forward as a charge against the Permanent Building Fund for 1911-1912 .....	26,032.06		
Sundry Debtors .....	39,169.92		
G.—Suspense Accounts .....	59,289.37		
Losses in Investments:			
Montgomery avenue Bonds .....	\$21,999.00		
Highland Tract Lots .....	156.29		
	22,155.29		
	\$1,136,127.34	Carried forward .....	\$12,877,175.69

<i>Brought forward</i> .....	\$1,136,127.34	<i>Brought forward</i> .....	\$12,877,175.69
W. A. McKowen Defalcation .....	44,120.10		
Equipment:			
General .....	\$1,231,270.97		
Bancroft Library .....	250,005.00		
	<u>1,481,275.97</u>		
Cash:			
I. W. Hellman, Jr., Treasurer....	\$204,130.72		
Cash in hands of departments, deposited with Treasurer	1,376.56		
after June 30, 1911 .....	9,550.00		
Contingent Funds .....			
Certified Checks (accompanying bids) .....	395.00		
Wells, Fargo & Co., deposit ac- count .....	200.00		
	<u>215,652.28</u>		
	<u>\$12,877,175.69</u>		<u>\$12,877,175.69</u>

## SUMMARY OF INCOME

YEAR ENDING JUNE 30, 1912

From Investments .....	\$186,760.59		
United States .....	80,000.00		
State of California .....	1,124,507.19		
			<hr/>
		\$1,391,267.78	
Students' Fees .....	\$118,521.63		
Dental Department .....	19,367.77		
Medical Department .....	11,156.78		
University Hospital .....	29,242.09		
Los Angeles Medical Department .....	4,118.19		
Sale of agricultural produce, etc. ....	120,284.72		
Miscellaneous .....	15,023.53		
Receipts from concerts, etc. ....	2,391.30		
			<hr/>
		320,106.01	\$1,711,373.79
Gifts for current use .....	\$67,216.30		
Gifts for architectural expenses and for building work .....	16,418.56		
			<hr/>
		83,634.86	1,795,008.65
Gifts of real estate and improvements ....	\$31,449.58		
Gifts for endowments .....	450,943.94		
			<hr/>
		482,393.52	2,277,402.17
Turning over of funds (as repayment of loans, students' deposits due to be returned, etc.) .....		1,053,289.36	
			<hr/>
		\$3,330,691.53	
			<hr/>

## SUMMARY OF EXPENDITURES

YEAR ENDING JUNE 30, 1912

Administration .....	\$275,582.37		
Library .....	78,563.23		
Agriculture (excluding building opera- tions appearing under that head).....	338,568.77		
Other departments .....	560,938.07		
Miscellaneous .....	16,388.66		
			<hr/>
		\$1,270,041.10	
Scholarships and Prizes .....	\$21,437.50		
Summer Session .....	31,634.97		
Lick Observatory .....	46,668.12		
Dental Department .....	23,737.43		
Medical Department (including University Hospital and Los Angeles Medical De- partment .....	77,566.34		
			<hr/>
		201,044.36	\$1,471,085.46
Musical and Dramatic .....	\$2,231.57		
Academy of Pacific Coast History .....	6,087.82		
			<hr/>
		8,319.39	1,479,404.85
			<hr/>
Carried forward .....		\$1,479,404.85	\$1,479,404.85



<i>Brought forward</i> .....	\$1,479,404.85	\$1,479,404.85
Watershed lands: Purchase of lands in Strawberry Cañon .....	1,455.90	1,480,860.75
Building operations .....	398,643.78	1,879,504.53
Wilmerding Trades School .....	30,519.07	1,910,023.60
Turning over of funds (as loans, repayment of students' deposits, etc.) .....	1,180,299.16	
	<u>\$3,090,322.76</u>	

INCOME AVAILABLE FOR GENERAL EDUCATIONAL,  
ADMINISTRATIVE, AND SCIENTIFIC  
PURPOSES IN 1911-12

Total income available for current use:		
Investments .....	\$186,760.59	
United States .....	80,000.00	
State of California.....	1,124,507.19	
		\$1,391,267.78
Students' Fees .....	118,521.63	
Dental Department .....	19,367.77	
Medical Department .....	11,156.78	
University Hospital .....	29,242.09	
Los Angeles Medical Department.....	4,118.19	
Sale of Agricultural Produce etc.....	120,284.72	
Miscellaneous .....	15,023.53	
Receipts from Concerts, etc.....	2,391.30	
		320,106.01
Gifts for current use.....		67,216.30
		<u>\$1,778,590.09</u>

## Deduct:

Permanent Building Fund moneys .....	\$190,131.92
Wilmerding School (expenditures) .....	30,519.07

## Income on Endowment added to principal:

Alumni Association Life Membership Fund .....	\$210.58
Alumni Hall Fund.....	510.14
Bennett Prize Fund.....	31.63
Class of 1881 Loan Fund.....	27.56
Class of 1886 Loan Fund.....	188.08
Class of 1895 Loan Fund.....	51.26
Class of 1898 Loan Fund.....	3.44
Class of 1903 Loan Fund.....	31.07
Class of 1905 Fund .....	5.90
Class of 1908 Fund .....	14.29
Cole Scholarship Fund.....	125.98
Cook Prize Fund.....	17.35
E. A. Denicke Loan Fund.....	188.61

<i>Carried forward</i> .....	\$1,405.49	\$220,650.99	\$1,778,590.09
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## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$1,405.49	\$220,650.99	\$1,778,590.09
Dental Endowment Fund.....	272.51		
Doe Library Fund.....	7,094.86		
Grubstake "W" Loan Fund .....	349.66		
Hamerslag Loan Fund.....	349.66		
Medal Loan Fund.....	12.33		
Men's Dormitory Fund.....	21.73		
Napa Seminary Loan Fund.....	8.32		
Prytanean Hospital Fund.....	46.19		
Royer Endowment Fund.....	216.36		
Sather Classical Chair Fund.....	2,918.79		
Sather Historical Chair Fund.....	2,918.79		
Sather Fund awaiting distribution....	7,445.07		
Special Senior Class Loan Fund.....	18.35		
Students' Co-operative Society.....	306.95		
Walton Loan Fund.....	309.55		
Women's Dormitory Fund.....	45.13		
		23,401.48	
Income payable to Class Secretaries:			
Class of 1909 Loan.....	\$59.10		
Class of 1910 Fund.....	78.67		
Class of 1911 Fund.....	75.11		
Class of 1912 Fund.....	15.79		
Alumnae Y. W. C. A.....	14.58		
Y. W. C. A. Fund.....	122.22		
		365.47	
Receipts from Concerts.....		2,391.30	
State Appropriations:			
Los Angeles Medical Dept. Building	\$4,675.60		
Chico Forestry Station, Barn and Fence .....	874.90		
University Farm .....	121,235.11		
Hog Cholera Serum .....	8,959.88		
Insecticides and Fungicides .....	4,980.14		
Farmers' Institutes .....	15,000.00		
Southern California Buildings and lands .....	14,352.67		
		170,078.30	
Students' Fees, Summer School of Surveying.....		2,800.00	
Students' Fees, Summer School of Surveying Com- missary .....		4,140.00	423,827.54
Available for current educational, scientific and administrative purposes .....			\$1,354,762.55
Deduct also:			
Dental Department Expenditures .....	\$23,737.43		
Medical Department Expenditures, including Uni- versity Hospital and Los Angeles Medical Dept....	77,167.90		
Anthropology Department Expenditures.....	10,780.37		
Lick Observatory Expenditures.....	\$31,870.20		
Lick Observatory, receipts from donations	10,400.00		
		42,270.20	
<i>Carried forward</i> .....		\$153,955.90	\$1,354,762.55

# INCOME

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<i>Brought forward</i> .....	\$153,955.90	\$1,354,762.55
Sale of Keeler Volume (Receipts) .....	57.15	
State Appropriations:		
Cereal Investigation (Receipts).....	\$7,500.00	
Imperial County Investigation (Re-		
ceipts) .....	11,098.92	
Plant Diseases, Northern (Receipts)	7,771.14	
Viticulture (Receipts) .....	7,500.00	
Southern California Pathological La-		
boratory and Equipment (Re-		
ceipts) .....	21,132.29	
		55,002.35
Donations for University Hospital .....	725.00	
Sales Funds:		
University Farm .....	\$79,591.10	
Cereal Produce .....	1,751.84	
Hog Cholera Serum.....	9,888.57	
Southern California Pathological La-		
boratory .....	1,210.63	
Viticultural Produce .....	197.28	
		92,639.42
California Educational Butter Scoring Contest.....	521.35	302,901.17
Available at Berkeley for general educational, scientific and adminis-		
trative purposes .....		<u>\$1,051,861.38</u>

# INCOME

JULY 1, 1911, TO JUNE 30, 1912

Income on Investments:		
Interest on mortgage and collateral loans.....	\$78,578.85	
Interest on loans to students from endowed loan		
funds .....	190.24	
		\$78,769.09
Interest on bonds:		
State bonds (from the State) .....	\$45,060.00	
Diverted funds: from the State (see act approved		
March 3, 1893, Stats. 1893:75, and also amend-		
ment Stats. 1899:93) .....	4,785.00	
Bear Gulch Water Company (two coupons accrued,		
due January, 1912, and July, 1912) .....	8,200.00	
Bohemian Club .....	45.00	
Oakland Traction Consolidated .....	750.00	
Pacific Gas and Electric Company .....	60.27	
Sacramento Gas and Electric Company .....	50.00	
Southern Pacific Railroad, 1st Refunding 4's.....	1,320.00	
Tonopah United Water Company .....	1,200.00	
		61,470.27
<i>Carried forward</i> .....		<u>\$140,239.36</u>

<i>Brought forward</i> .....		\$140,239.36
Dividends on stocks:		
Bank of California .....	\$1,000.00	
Fireman's Fund Insurance Co. ....	1,400.00	
Kennedy Mining and Milling Co. ....	3,300.00	
Mackay Companies: Preferred .....	2,816.00	
University Land Co. ....	75.00	
Weinstock-Lubin Real Estate Co.: Preferred.....	325.00	
		8,916.00
Dividends on Savings Bank Deposits, etc.		
First Federal Trust Co., of San Francisco .....	\$328.81	
Central Savings Bank of Oakland .....	559.01	
Interest on Certificates of Deposit turned over to the University of California by the Class of 1912	10.00	
		897.82
Rents:		
University Cottages, Palmer House and 2642 Sylvan Way (after deduction of structural and other repairs) .....	\$970.66	
Watershed Lands:		
Such Ranch .....	418.50	
Grazing Land (Stanley) .....	75.00	
Seaman Cottage .....	15.00	
House on Lot 5, University Heights .....	3.00	
1615 Sixth street, West Berkeley .....	64.01	
Broadway Terrace lots, Oakland .....	10.00	
Fresno County Lands .....	10.00	
Potrero avenue lots, San Francisco .....	120.00	
San Luis Obispo County Lands .....	48.87	
Wilmerding School vacant block and shops .....	1,880.00	
Flood lands, Menlo Park (Henry Nelson) .....	1,246.00	
Lick Observatory lands (R. F. Morrow).....	80.00	
Thompson lot on Dearborn street, Chicago .....	3,000.00	
First street Building, San Francisco, leased to Blake, Moffitt & Towne (after allowing for \$41.30 for repairs to roof) .....	10,902.10	
Rent of room at First and Market street, San Francisco .....	5.00	
14th and Washington streets, Oakland, net rental from December to June inclusive (Gross Re- ceipts \$15,064.60, less repairs and commissions \$904.12) .....	14,160.48	
		33,008.62
Interest at 2 per cent per annum on daily balances in hands of Treasurer .....		6,186.91
		\$189,248.71
Less proportion of income in Endowment Pool, due to Mrs. Jane K. Sather .....		
	\$2,403.74	
Less proportion of income in Endowment Pool, due to Madame Thérèse F. Colin .....		
	84.38	
		2,488.12
<i>Carried forward</i> .....		\$186,760.59

*Brought forward* ..... \$186,760.59

## United States:

Morrill College Aid Fund .....	\$50,000.00	
Agricultural Experiment Station (Hatch Fund).....	15,000.00	
Adams Fund .....	15,000.00	
		<hr/> 80,000.00

## State of California:

Three-fourths of the State University Fund (tax of three cents on each \$100 of assessed valuation): remaining one-fourth is devoted to Permanent Improvements and appears under that head. (Total income from the three-cent tax was \$760,527.70) .....	\$570,395.78
General Appropriation: "For the Support of the University" .....	100,000.00

## Special Appropriations for Agriculture:

Cereal Investigation .....	\$7,500.00
Farmers' Institutes .....	15,000.00
Hog Cholera Serum .....	8,959.88
Imperial County Investigations.....	11,098.92
Insecticides and Fungicide Control....	4,980.14
Plant Diseases, Northern appropriation 1909 .....	271.14
Plant Diseases, Northern appropriation 1911 .....	7,500.00
Southern California Pathological Laboratory .....	20,003.54
Southern California Pathological Laboratory Equipment .....	1,128.75
Whittier Barn and Workshop .....	993.64
Whittier Heating Plant .....	347.54
Whittier, Enlargement of plant.....	3,971.31
Riverside Buildings and Lands.....	9,040.18

## University Farm:

Deficiency, appropriation for.....	12,289.37
Buildings .....	41,950.81
Equipment .....	6,068.96
Implements .....	974.68
Improvement of Grounds.....	2,356.51
Light, Power, Water, and Sewer .....	1,884.04
Livestock .....	5,319.90
Salaries .....	27,074.92
General Support .....	23,315.92
Viticulture .....	7,500.00
Chico Forestry Station Barn.....	499.90
Chico Forestry Station Fence.....	375.00
	<hr/> 220,405.05
Los Angeles Medical Department Hospital .....	4,675.60

<i>Carried forward</i> .....	\$895,476.43	\$266,760.59
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## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$895,476.43	\$266,760.59
Music .....	2,998.22	
Reimbursement for loss of income .....	31,000.00	
Printing .....	4,900.62	
		<hr/> 934,375.27

NOTE.—The total received (and receivable) from the State of California was \$1,124,507.19, composed of the above figure of \$934,375.27 and Permanent Building Fund, \$190,131.92.

The total of the appropriations for the University Farm is \$121,235.11, of which \$62,680.21 is for maintenance and support, and \$58,554.90 for buildings, equipment, and improvements.

## Students' Deposits and Fees (net):

## Deposits (balances retained for laboratory charges):

Agriculture .....	\$586.50	
Anatomy, Summer Session, 1912....	60.00	
Astronomy .....	307.50	
Bacteriology .....	785.98	
Botany .....	713.75	
Botany (Summer Session, 1911)....	97.50	
Botany (Summer Session, 1912)....	160.00	
Chemistry .....	11,665.22	
Chemistry (Summer Session of 1911)	55.00	
Chemistry (Summer Session of 1912)	1,470.00	
Civil Engineering .....	3,156.50	
Home Economics (Summer Session of 1911) .....	102.25	
Home Economics (Summer Session of 1912) .....	394.00	
Manual Training (Summer Session of 1911) .....	284.78	
Manual Training (Summer Session of 1912) .....	406.75	
Mechanics .....	2,337.95	
Mineralogy .....	277.50	
Mining .....	1,299.75	
Montessori Method (Summer Session of 1912) .....	40.00	
Physics .....	4,427.10	
Physics (Summer Session of 1911)	86.25	
Physics (Summer Session of 1912)	420.00	
Physiology .....	125.15	
Physiology (Summer Session of 1912) .....	12.50	
Psychology (Summer Session of 1911) .....	14.00	
Public Health (Summer Session of 1912) .....	250.00	
<i>Carried forward</i> .....	<hr/> \$29,535.93	<hr/> \$1,201,135.86

<i>Brought forward</i> .....	\$29,535.93	\$1,201,135.86
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Zoology .....	1,397.50
Zoology (Summer Session of 1911) .....	59.50
Zoology (Summer Session of 1912) .....	12.50
Zymology .....	11.50

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\$31,016.93

## Fees:

Changing Courses .....	\$275.50
Delayed Registration for Courses....	922.00
Gymnasium .....	14,578.75
Infirmary .....	22,321.20
Medicine (Summer Session of 1911) .....	10.00
Non-resident (for students from out- side California) .....	4,555.00
Special Examinations .....	1,950.00
Summer School of Surveying.....	2,800.00
Summer School of Surveying (Com- missary Account) .....	4,140.00
Summer Session, 1911 .....	5,285.50
Summer Session, 1912 .....	30,666.75

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87,504.70

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118,521.63

Dental Department: Fees and miscellaneous receipts, exclusive of of donations .....	19,367.77
Medical Department: Fees and miscellaneous receipts .....	11,156.78
Los Angeles Medical Department: Fees and miscellaneous receipts.....	4,118.19
University Hospital in San Francisco: Miscellaneous receipts, exclusive of donations .....	29,242.09

## Sale of Agricultural Produce, etc.:

License fees and tax for inspection of commercial fertilizers .....	\$15,970.43
License Fees for Sale of Insecticides.....	1,242.35
California Educational Butter Scoring Contest .....	521.35
Sale of Adams Fund produce .....	32.50
Sale of Agricultural produce .....	33.79
Sale of Cereal produce .....	1,751.84
Sale of Dairy produce .....	9,769.10
Sale of Dairy cattle .....	11.64
Sale at Forestry Station .....	3.50
Sale of Hog Cholera Serum .....	9,888.57
Sale of Dead Hogs .....	60.24
Sale of Southern California Pathological Laboratory produce .....	1,210.63
Sale of Viticultural produce .....	197.28

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40,693.62

## University Farm:

Creamery .....	\$49,945.51
Dormitory .....	13,159.50

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<i>Carried forward</i> .....	\$63,105.01	\$40,693.62	\$1,383,542.32
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## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$63,105.01	\$40,693.62	\$1,383,542.32
Poultry sales .....	1,824.99		
Stock sales, Livestock .....	3,333.90		
Stock sales, Milk, etc. ....	1,522.45		
Stock sales, Wool, etc. ....	141.50		
Students' deposits .....	2,351.45		
General produce .....	7,176.27		
Veterinary sales .....	62.00		
Shop sales .....	73.53		
		79,591.10	
			120,284.72

## Miscellaneous:

## Printing and Publishing:

Charges for work done by Printing			
Office .....	\$1,026.50		
Sale of Publications .....	2,828.24		
Sale of Syllabus .....	6.65		
Sale of Weinstock Lectures .....	19.52		
Sale of Political Science Syllabus....	23.65		
Sale of University Extension Syllabus .....	5.40		
Sale of Keeler Volume .....	57.15		
Sale of "Zoe" .....	9.00		
Sale of Academy of Pacific Coast			
History Publications .....	151.06		
		\$4,127.17	

## Chemistry Department:

Use of chemicals .....	\$20.00		
Analyses .....	255.00		
Chemicals sold .....	52.40		
		327.40	

## Civil Engineering Department:

Tests made, etc .....		635.35	
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## Dental Department:

Refund by Gas and Electric Co. ....		6.32	
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## Library:

Sale of Books and Periodicals .....	69.07		
Sale of wood, lumber, junk, etc. ....	187.95		
Military belts .....	6.64		
Reimbursement for labor, materials, light, and water	4,695.95		
Reimbursement for postage, stenographic work, etc...	791.14		
Library Fines .....	50.40		
Examination of Schools .....	175.00		
Infirmary Receipts for operations, laundry, prescriptions, etc. ....	2,431.00		
Duplicate Diplomas .....	35.00		
<i>Carried forward</i> .....	\$13,538.39	\$1,503,827.04	

<i>Brought forward</i> .....	\$13,538.39	\$1,503,827.04
Anthropology: Contingent fund in hands of the head of the department, heretofore treated as paid out of departmental budget .....	129.63	
Interest on notes given by Students for Operations at Infirmary .....	5.86	
Wilmerding School: Director's receipts .....	1,349.65	
	<hr/>	15,023.53
Receipts from Musical and Dramatic events .....		2,391.30
Gifts for current use:		
Mrs. Hearst:		
Phoebe A. Hearst Scholarships.....	\$2,400.00	
Anthropology, for Salaries .....	1,680.00	
Anthropology, for Erection of Totem Pole .....	500.00	
Anthropology, for Fireproofing Museum .....	158.40	
Anthropology, for Reconstruction of Museum .....	691.29	
Hearst Memorial Mining Building equipment .....	2,186.48	
	<hr/>	7,616.17
See also under "For the Lick Observatory" and under "Donations for Erection of Buildings, etc."		
Scholarships:		
(Mrs. Hearst as above).		
(The State of California Scholar- ships are supported by \$3,500 from the State University Fund).		
Catherine Allen Scholarship .....	\$250.00	
San Jose High School Scholarship....	375.00	
Levi Strauss Scholarship (the gift of Levi Strauss & Co.).....	3,500.00	
F. M. Smith Fellowship .....	1,500.00	
University Fellowship Academy of Pacific Coast History, per Native Sons of the Golden West .....	3,750.00	
	<hr/>	9,375.00
Prizes:		
Bonnheim Prize .....	\$250.00	
Bryce Historical Essay Prize .....	100.00	
W. C. T. U. Essay Prize .....	50.00	
	<hr/>	400.00
Astronomy:		
Academy of Arts and Sciences .....	2,100.00	
	<hr/>	
<i>Carried forward</i> .....	\$19,491.17	\$1,521,241.87

<i>Brought forward</i> .....		\$19,491.17	\$1,521,241.87
Library donations for current use:			
History 1A, Class in .....	\$1,000.00		
J. F. Fugazi, for Architectural Books .....	100.00		
Library Exchange account .....	7.60		
For Irish Books .....	100.00		
		1,207.60	
Salary of Advisor .....		100.00	
For a bronze bust of Prof. Hilgard: various small donations .....		484.85	
For the Lick Observatory:			
Wm. H. Crocker: for apparatus.....	\$600.00		
Mrs. Hearst: swimming pool .....	800.00		
Estate of D. O. Mills: Southern Hemisphere Expedition .....	9,000.00		
		10,400.00	
Agriculture:			
For Investigation of Nitrogen Fertilizers, per W. S. Myers .....	\$300.00		
For Investigation of Lima Bean ....	100.00		
		400.00	
University Hospital in San Francisco:			
For erection of incinerator .....	\$225.00		
For X-Ray apparatus .....	500.00		
		725.00	
Palaeontological Research: A friend .....		2,400.00	
Summer Session, 1911: towards a salary, by V. H. Henderson .....		41.67	
Zoology:			
For salaries (assistance in working up results of the Agassiz Expedition to the South Seas): Prof. Alexander Agassiz .....	\$600.00		
San Diego Marine Biological Laboratory Association .....	1,999.92		
Miss Annie M. Alexander: for the California Museum of Vertebrate Zoology .....	11,389.09		
		13,989.01	
Carnegie Foundation for the Advancement of Teaching: Retiring Allowance for:			
G. H. Howison, Philosophy .....	\$2,875.00		
F. Soule, Civil Engineering .....	2,045.00		
I. Flagg, Greek .....	1,600.00		
A. Putzker, German .....	1,500.00		
<i>Carried forward</i> .....	\$8,020.00	\$49,239.30	\$1,521,241.87



<i>Brought forward</i> .....	\$8,020.00	\$49,239.30	\$1,521,241.87
R. H. Loughridge, Agriculture .....	1,420.00		
Sarah F. L. Rising (widow of W. B. Rising), Chemistry .....	1,035.00		
Martha S. D. Stringham (widow of Irving Stringham), Mathematics .....	960.00		
C. B. Bradley, English .....	1,750.00		
Bernard Moses, Political Science .....	2,400.00		
		15,585.00	
Academy of Pacific Coast History .....		2,392.00	
(These gifts to the Academy were handled by the University as custodian of the funds in behalf of the Academy.)			
			67,216.30
<b>Donations for Erection of Buildings, etc.:</b>			
Boalt Hall of Law .....		\$9,065.00	
Erection of Tennis Courts .....		57.50	
Marble Chairs in Greek Theatre .....		925.00	
Girton Hall: Women's Senior Hall .....		1,042.34	
Mrs. Hearst: for grading around the Hearst Memorial Mining Building .....		1,500.00	
Mrs. Jane K. Sather: for further work on Sather Gateway .....		3,828.72	
			16,418.56
<b>Donation of Real Estate and Improvements:</b>			
Whitaker Forest, 320 acres in Tulare County .....		\$9,600.00	
Associated Students of the University of California: Buildings and Improvements on Sylvan way and College avenue .....		21,849.58	
			31,449.58
<b>Income for Permanent Improvements:</b>			
Permanent Improvement Fund (one-fourth of the State University Fund) .....			190,131.92
			\$1,826,458.23
<b>Gifts for Endowments:</b>			
Alumnae of Young Women's Christian Association of University of California .....		\$600.00	
Alumni Association Life Membership Fund .....		20.00	
Alumnus Book Fund .....		500.00	
Class of 1881 Loan Fund .....		1,005.00	
Class of 1887 Library Fund .....		350.00	
Class of 1898 Loan Fund .....		200.00	
Class of 1900 Library Fund .....		50.00	
Class of 1911 Loan Fund .....		750.82	
Class of 1912 Fund .....		1,900.00	
W. R. Davis Scholarship Fund .....		5,000.00	
E. A. Denicke Library Fund .....		1,000.00	
E. A. Denicke Faculty Loan Fund .....		5,000.00	
Hesse Memorial Scholarship Fund .....		3,800.00	
Irving Prize Fund .....		500.00	
<i>Carried forward</i> .....		\$20,675.82	\$1,826,458.23

## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$20,675.82	\$1,826,458.23
Napa Seminary Loan Fund .....	300.00	
Prytanean Fund .....	250.00	
Senior Class Loan Fund .....	1,000.00	
Students' Coöperative Fund .....	11,000.00	
Women's Dormitory Fund .....	2,021.04	
Young Women's Christian Association of the University of California .....	5,000.00	
Jane K. Sather Legacy		
Jane K. Sather Historical Chair Fund .....	100,000.00	
Jane K. Sather Classical Chair Fund (to which is added the present Jane K. Sather Fund, \$70,805.00: making the total of this fund, \$100,000) .....	29,195.00	
Jane K. Sather Historical Library Fund .....	12,461.68	
Jane K. Sather Campanile and the Sather Bells	225,000.00	
Jane K. Sather Fund awaiting distribution: to be divided, ultimately, between the Historical and Classical Chair Funds .....	44,040.40	
		<u>450,943.94</u>

NOTE.—The total received from the legacy of Mrs. Jane K. Sather was \$455,949.72. This is segregated into funds as mentioned above, amounting to \$410,697.08: the difference of \$45,252.64 was used for paying street assessments, taxes, and payments to beneficiaries by the trustees of her will.

## Turning Over of Funds:

Students' deposits: later returned or due to be returned .....	\$16,038.87	
Military uniforms .....	11,083.80	
Certified checks accompanying bids on contracts .....	70,545.32	
Deposits on plans .....	255.00	
Football Tickets .....	45.00	
		<u>97,967.99</u>

## Income on properties held in trust:

For Mrs. Jane K. Sather:

    Proportion of Endowment Pool \$2,403.74

For Madame Thérèse F. Colin:

    Proportion of Endowment Pool 84.38

Rents received from properties donated by the Associated Students ..... 143.00 |  ||  |  | 2,631.12 |

Jane K. Sather Legacy: amount received, which was utilized for payments made by trustee to beneficiaries, taxes, street assessments, etc. ....

45,252.64

*Carried forward* .....

\$145,851.75 \$2,277,402.17

## EXPENDITURES

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<i>Brought forward</i> .....	\$145,851.75	\$2,277,402.17
Change of form of investments:		
Mortgage loans repaid and renewed..	\$562,602.99	
Collateral loans repaid and renewed	245,500.00	
Student notes from Loan Funds.....	1,746.27	
Watershed notes .....	20,000.00	
Broadway Terrace Lots, Oakland, sold on contract to Country Club Heights Co. ....	71,000.00	
Broadway Terrace Lots, Oakland, Cash for quieting title to Lots 3, 4, and 5 in Block F .....	88.35	
Pacific Gas and Electric Co. Bonds	2,100.00	
Sather Banking Co. Stock: dividend in liquidation .....	400.00	
	<hr/>	903,437.61
Contingent Fund: Reduction of Fund in hands of V. H. Henderson .....	4,000.00	
	<hr/>	1,053,289.36
		<hr/>
		\$3,330,691.53
		<hr/>

## EXPENDITURES

JULY 1, 1911, TO JUNE 30, 1912

## Administration:

## Administrative Salaries:

Salaries .....	\$44,536.32	
Advisors .....	3,600.00	
Janitors, Watchmen, etc. ....	33,118.35	
President's Contingent Expense al- lotment .....	3,000.00	
	<hr/>	\$84,254.67
Repairs .....	18,879.41	
Site Improvement and Maintenance.....	16,607.65	
Water .....	8,346.39	
Fuel (aside from oil).....	1,945.10	
Light, Power and Heating System.....	43,887.27	
Equipment .....	3,586.19	
Telephone, Telegraph and Expressage.....	5,979.11	
Postage .....	2,775.46	
Stationery .....	1,380.55	
Examination of Schools.....	2,151.73	
Auditing .....	2,052.90	
Lectures .....	425.00	
Publications (the scientific series are included, but not the administrative printing) .....	10,150.72	
	<hr/>	
<i>Carried forward</i> .....	\$202,422.15	

Brought forward .....	\$202,422.15	
Printing Office .....	11,420.01	
Net cost of operating Storehouse for the six months months ending June 30, 1912.....	608.05	
		<hr/> \$214,450.21

NOTE.—The cost of printing for individual departments is not included in this figure, such items have been charged to the various departments.

#### Administrative Expense:

Assistance and stenographers in all Administrative Departments .....	\$30,216.35	
Traveling Expenses.....	2,218.83	
Legal Expenses .....	1,174.20	
Charter Day—Honorarium .....	\$500.00	
Expenses, including reception.....	665.84	
	<hr/> 1,165.84	
Moving various departments into Bacon Hall, etc....	1,296.60	
Moving Library to new building (expended during year) .....	329.00	
Moving Drawing Department to Calif. Hall Attic....	267.45	
Boalt Hall, removal of temporary book stacks, etc....	43.70	
Gas and Electricity .....	640.58	
Rental of office in Crocker Bldg., San Francisco.....	720.00	
Rental of rooms in Stiles Hall.....	205.00	
Rental of rooms in Faculty Club (Univ. Guest Rm.)	120.00	
Rental of Safe Deposit Box.....	60.00	
Rental of Auxiliary Fire Alarm Service at Affiliated Colleges .....	132.00	
Premium on Bonds .....	564.23	
Half-hour of Music .....	529.30	
Entertainment .....	383.10	
Press clippings .....	153.33	
Hack and auto hire.....	144.50	
Advanced for purchase of books in Europe.....	250.00	
S. B. Mitchell—Allowance for removal expenses.....	60.00	
Redemption of stolen microscopes.....	101.50	
Fee for investigation of thefts from lockers.....	25.00	
Dues for Association of American Uni- versities .....	\$40.00	
Dues for National Association of State Universities .....	15.00	
	<hr/> 55.00	
Photos and blue prints.....	92.42	
Illuminating documents .....	75.00	
Exchange on drafts .....	62.74	
Placing and removing gates and barriers.....	80.55	
Commencement Day expenses.....	11.50	
Labor Day expenses.....	27.75	
Reporting addresses and lectures.....	37.60	
Directory service in California Hall.....	15.00	
	<hr/>	
Carried forward .....	\$41,258.07	\$214,450.21

## EXPENDITURES

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<i>Brought forward</i> .....	\$41,258.07	\$214,450.21
Cartage of piano for University meetings.....	38.50	
Moving safe to Chemistry Building and back .....	30.00	
Bicycle repairs .....	32.20	
Miscellaneous .....	57.83	
	<hr/>	41,416.60
Students' Infirmary:		
Equipment and running expenses.....	\$19,317.32	
Donations for furnishings.....	398.24	
	<hr/>	19,715.56
Library:		
Departmental allotment:		
Salaries .....	\$27,914.02	
Expense .....	4,351.75	
Assistance .....	5,317.68	
Depository cataloguing .....	1,371.97	
Bancroft Library cataloguing.....	1,500.00	
Equipment .....	757.58	
Binding .....	6,010.05	
Books and periodicals.....	20,819.60	
Completing sets .....	321.19	
Freight, insurance, etc. ....	957.72	
	<hr/>	\$69,321.56
Class of 1900 Library Fund, interest .....	5.56	
Class of 1907 Library Fund, interest .....	58.50	
Ethel W. Crocker donation.....	680.63	
E. A. Denicke Library Fund, interest .....	227.04	
History 1A donation .....	918.07	
Jucksch Fund, interest.....	47.73	
Irish books, donation for .....	42.83	
Mary Lake Memorial, donation .....	67.12	
Eugene Meyer, Jr., Library Fund, interest .....	65.88	
J. K. Moffitt donation.....	322.54	
Michael Reese Library Fund, interest .....	3,126.05	
Jane K. Sather Library Fund, interest .....	759.34	
Jane K. Sather Law Library Fund....	2,579.00	
Claus Spreckels donation.....	318.68	
Caroline Thorsen donation for Anat- omy books .....	2.40	
"Zoe," Sale of .....	20.30	
	<hr/>	9,241.67
	<hr/>	78,563.23
NOTE.—Total expended for books and periodicals, \$30,061.27.		
Agriculture:		
Departmental allotment:		
Agriculture .....	\$21,027.68	
Bacteriology .....	403.30	
Dairy—Purchase of cows.....	1,060.00	
	<hr/>	
<i>Carried forward</i> .....	\$22,490.98	\$354,145.60



## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....		\$22,490.98		\$354,145.60
Education .....	2,073.14			
Entomology .....	1,076.65			
Forestry .....	1,499.93			
			27,140.70	
Carnegie Foundation: retiring allowance.....			1,420.00	
United States:				
Adams Fund .....	\$15,000.00			
Agricultural Experiment Station.....	15,000.00			
Morrill College Aid Fund.....	21,633.26			
			51,633.26	
Agricultural Experiment Station sales....	22.15			
California Educational Butter Scoring contest .....	342.84			
Dairying .....	8,419.18			
Fertilizer Control .....	10,511.70			
Donation for investigation of Nitrogen Fertilizers .....	197.05			
Cereal Sales Fund .....	1,813.75			
Hog Cholera Serum Sales.....	7,394.63			
Poultry Experiment Station Sales Fund	192.60			
Southern California Pathological Labor- atory sales .....	295.80			
University Farm:				
Students' deposits .....	2,204.12			
Creamery .....	48,490.85			
Dormitory .....	12,034.77			
Poultry sales .....	1,384.15			
Sales of produce.....	8,824.85			
Veterinary sales.....	52.70			
Shop sales .....	44.53			
Stock sales .....	4,455.47			
Viticultural sales .....	120.31			
			106,801.45	
State Appropriations for Agriculture:				
Cereal Investigation .....	\$7,467.24			
Farmers' Institutes .....	12,978.47			
Hog Cholera Serum .....	8,959.88			
Imperial County Investigations .....	11,098.92			
Insecticides and Fungicides .....	4,980.14			
Plant Diseases, Northern .....	7,434.22			
Southern California Pathological Laboratory .....	20,003.54			
Southern California Pathological Laboratory equipment .....	1,128.75			
Printing publications and circulars..	4,856.77			
<i>Carried forward</i> .....	\$78,907.93	\$186,995.41	\$354,145.60	

## EXPENDITURES

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Brought forward .....\$78,907.93      \$186,995.41      \$354,145.60

## University Farm:

Equipment .....	6,068.96
Implements .....	974.68
Improvement of grounds.....	2,340.93
Livestock .....	5,319.90
Salaries .....	27,074.92
General support .....	23,292.62
Viticulture .....	7,593.42

151,573.36

338,568.77

NOTE.—The following amounts, expended from appropriations made by the State on the construction of buildings, are not included in the above figures:

University Farm Buildings.....	\$41,950.81
University Farm, light, power, water and sewer .....	1,884.04
Barn and workshops at Whittier.....	993.64
Heating plant at Whittier.....	347.54
Enlargement of plant at Whittier.....	3,971.31
Buildings and lands at Riverside.....	9,040.18
Chico Forestry Station barn.....	499.90
Chico Forestry Station fence.....	375.00

\$59,062.42

Anatomy ..... 8,784.18

## Anthropology:

Departmental allotment .....	\$9,100.37
Mrs. Hearst's donation for salaries.....	1,680.00

10,780.37

Architecture ..... 9,480.96

## Astronomy:

Berkeley Department (departmental allotment).....	\$9,654.56
Donation by National Academy of Arts and Sciences .....	2,100.00

11,754.56

Botany ..... 16,676.48

Celtic ..... 600.00

## Chemistry:

Departmental allotment .....	\$21,648.02
Morrill College Aid Fund.....	6,199.80
Carnegie Foundation: Retiring allowance.....	1,035.00

28,882.82

## Civil Engineering:

Departmental allotment: .....	\$22,351.37
Morrill College Aid Fund.....	6,258.31
Carnegie Foundation: Retiring allowance.....	2,045.00

30,654.68

Drawing ..... 8,439.80

Carried forward ..... \$818,768.22

<i>Brought forward</i> .....		\$818,768.22	
Economics:			
Departmental allotment .....	\$5,303.73		
Cora Jane Flood Endowment Fund,			
interest, salaries .....	\$19,849.55		
Cora Jane Flood Endowment Fund,			
tablet and frame .....	185.00		
		20,034.55	25,338.28
Education .....			14,236.92
English:			
Departmental allotment .....	\$25,803.45		
Carnegie Foundation: Retiring allowance.....	1,750.00		
			27,553.45
Geography .....			3,546.63
Geology and Mineralogy.....			13,474.77
German:			
Departmental allotment .....	\$15,057.24		
Carnegie Foundation: retiring allowance.....	1,500.00		
			16,557.24
Greek:			
Departmental allotment .....	\$8,428.35		
Carnegie Foundation: retiring allowance.....	1,600.00		
			10,028.35
History .....			26,281.89
Hygiene .....			5,134.42
Irrigation .....			4,810.18
Jurisprudence .....			18,127.01
Latin .....			16,756.68
Mathematics:			
Departmental allotment .....	\$24,058.84		
Carnegie Foundation: retiring allowance.....	960.00		
			25,018.84
Mechanics:			
Departmental allotment .....	\$19,406.77		
John W. Mackay Jr. Endowment Fund, interest:			
Salaries .....	4,200.00		
John W. Mackay Jr. Endowment Fund, interest:			
Equipment .....	3,882.63		
Morrill College Aid Fund.....	3,774.96		
			31,264.36
Military Science and Tactics.....			3,013.64
Mining:			
Departmental allotment .....	\$16,261.10		
Morrill College Aid Fund.....	4,399.92		
Donation by Mrs. Hearst, for equipment of Hearst			
Memorial Mining Building .....	2,527.98		
			23,189.00
<i>Carried forward</i> .....			\$1,083,099.88

<i>Brought forward</i> .....		\$1,083,099.88
<b>Music:</b>		
Departmental expense .....	\$10.00	
State appropriation .....	2,998.22	
		3,008.22
<b>Oriental Languages:</b>		
Departmental allotment .....	\$1,817.56	
Tompkins Endowment Fund, interest, salaries.....	3,999.96	
		5,817.52
<b>Palaeontology:</b>		
Departmental allotment .....	\$5,599.92	
Donations by "A Friend" .....	2,237.19	
		7,837.11
<b>Pathology</b> .....		14,131.53
<b>Philosophy:</b>		
Departmental allotment .....	\$7,292.32	
D. O. Mills Endowment Fund, Interest, salaries.....	6,999.96	
Carnegie Foundation: retiring allowance.....	2,875.00	
		17,167.28
<b>Physical Culture</b> .....		7,136.49
<b>Physics:</b>		
Departmental allotment .....	\$27,122.31	
Morrill College Aid Fund.....	7,733.75	
		34,856.06
<b>Physiology</b> .....		11,394.96
<b>Political Science:</b>		
Departmental allotment .....	\$7,133.11	
Carnegie Foundation: retiring allowance .....	2,400.00	
		9,533.11
<b>Romanic Languages</b> .....		23,052.61
<b>Sanskrit</b> .....		1,800.00
<b>Semitic Languages</b> .....		1,999.92
<b>Slavic Languages</b> .....		2,225.52
<b>University Extension</b> .....		10.00
<b>Vertebrate Zoology, Museum of (donation by Miss Annie M. Alexander for support)</b> .....		11,389.09
<b>Zoology:</b>		
Departmental allotment .....	\$16,552.84	
Agassiz donation .....	600.00	
San Diego Marine Biological Laboratory donation (for two-thirds of Professor Ritter's salary).....	1,999.92	
Margaret B. Fowler donation.....	40.38	
		19,193.14
<b>Miscellaneous:</b>		
Expenditures made from Gymnasium Fee Receipts:		
Laundry .....	\$4,041.54	
Purchase of towels .....	1,483.15	
Sanitary drinking faucets .....	212.10	
Installing drinking fountains.....	102.50	
150 locker locks .....	110.25	
<i>Carried forward</i> .....	\$5,949.54	\$1,253,652.44

## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$5,949.54	\$1,253,652.44
Laundry baskets .....	80.36	
Moving steel lockers from Mining to Gymnasium .....	8.35	
Liquid soap and bleaching powder..	308.70	
Purchase of Tennis Nets.....	106.82	
Purchase of Baseball Goods.....	42.02	
Care of Tennis Courts.....	325.95	
Care of Basket Ball Courts.....	144.45	
Care of Swimming Pool.....	196.65	
Lumber for Spring-board.....	11.29	
Water for sprinkling .....	13.55	
Miscellaneous items .....	93.47	
		\$7,281.15
Redemption of taxes on Sylvan Way property .....	\$55.04	
Second installment of 1911 taxes on Sylvan way property donated to Regents .....	33.55	
Bancroft Library, expense .....	1,023.00	
Bust of Professor Hilgard, paid from donations .....	200.00	
Miscellaneous litigation expenses .....	61.90	
Hitchcock Lectures .....	500.00	
Weinstock Lectures .....	185.00	
Rewiring buildings on Campus.....	158.99	
Affiliated Colleges: repairs and mainte- nance of grounds .....	2,669.87	
Affiliated Colleges: rewiring buildings...	2,677.74	
Affiliated Colleges: fire precautions.....	521.52	
State Treasurer: refund for publications	8.50	
University Medals:		
Prizes for competition for .....	300.00	
Medals, new dies, expressage, etc. ....	314.30	
Short in cash during registration of students.. ..	24.50	
Highland Tract lot: taxes redeemed....	13.59	
Water rent on property at Menlo.....	179.15	
Taxes on property in Salt Lake City....	51.66	
Small repair work on Broadway Terrace, Oakland .....	129.20	
		9,107.51
		16,388.66
Scholarships and Prizes:		
State of California Scholarships.....	\$3,375.00	
Catherine Allen Scholarships .....	250.00	
Bonnheim Prize .....	355.00	
Bryce Historical Essay Prize .....	100.00	
Emily Chamberlain Cook Prize .....	45.00	
Scholarship for Tracy Crane .....	62.50	
James M. Goewey Scholarship .....	250.00	
<i>Carried forward</i> .....	\$4,437.50	\$1,270,041.10



## EXPENDITURES

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<i>Brought forward</i> .....	\$4,437.50	\$1,270,041.10
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Phoebe A. Hearst Scholarships .....	2,400.00
Cornelius B. Houghton Scholarship .....	150.00
Albert Sydney Johnston Scholarship .....	175.00
Martin B. Kellogg Memorial Fellowship .....	600.00
LeConte Memorial Fellowship .....	400.00
Frank M. Pixley Scholarship .....	200.00
San Jose High School Scholarship .....	250.00
Sheffield Sanborn Scholarships .....	750.00
Levi Strauss Scholarships .....	3,625.00
W. D. Thompson Scholarships .....	2,400.00
University Fellowships .....	4,000.00
University Fellowships in Academy of Pacific Coast History, from Native Sons of the Golden West....	1,400.00
Women's Christian Temperance Union Essay Prize..	50.00
Whiting Fund Fellowship .....	600.00

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21,437.50

## Summer Session:

Session of 1911 .....	\$20,958.33
Session of 1912 .....	4,891.82
Summer School of Civil Engineering .....	2,086.56
Summer School of Civil Engineering Commissary ....	3,698.26

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31,634.97

NOTE.—A statement of the total receipts and expenditures of the Summer Session of 1911 will be found on page 492.

## Lick Observatory:

Departmental allotment .....	\$31,870.20
State appropriation for Printing .....	43.85

## From gifts:

E. E. Barnard, for photographs .....	\$1,198.50
Carnegie Institution .....	1,237.47
Wm. H. Crocker, for apparatus .....	1,057.14
William Randolph Hearst, donation for earthquake recording appa- ratus .....	9.53
Mrs. Hearst, for Swimming Pool .....	350.00
Mrs. Hearst, for Publications .....	1,000.00
D. O. Mills Southern Hemisphere Expedition .....	9,901.43

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14,754.07

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46,668.12

## Dental Department:

Running expenses .....	23,737.43
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## Medical Department:

Running expenses .....	\$11,247.77
Donation for Diet Kitchen: Mrs. Drexler .....	173.44
Donation for Incinerator .....	225.00

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*Carried forward* ..... \$11,646.21 \$1,393,519.12

## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$11,646.21	\$1,393,519.12	
Los Angeles Medical Department:			
Running Expenses .....	10,000.00		
University Hospital in San Francisco:			
Equipment, Maintenance, etc. ....	55,920.13		
			77,566.34
Musical and Dramatic performances .....			2,231.57
Academy of Pacific Coast History .....			6,087.82
Watershed Lands (purchase of lands, etc., in Strawberry Cañon, to be paid for, ultimately, out of Permanent Building Fund moneys. The total cost of these lands up to date is \$167,632.84, and is being charged to Permanent Building Fund at the rate of \$20,000 per annum: three installments have been so charged) .....			1,455.90
<b>Building Operations:</b>			
Expenditures during the year on work in progress, paid from General Funds:			
Bath House and Equipment .....	\$313.36		
Civil Engineering Building, alteration....	190.75		
Civil Engineering Testing Laboratory....	3,327.68		
Total expenditure during year was \$4,309.45, of which \$981.77 was charged against the departmental allotment for Civil Engineering.			
East Hall alterations .....	737.00		
Total expenditure during year was \$3,241.66: of this, \$2,504.66 is charged against Permanent Building Fund.			
Infirmary Annex (paid for out of fees received from students) .....	745.45		
Lick Observatory Dormitory and Cottages .....	1,170.68		
Lick Observatory Earthquake Replacement .....	6,178.86		
South Hall alterations .....	1,879.00		
Swimming Tank (cost ultimately to be defrayed by Gymnasium fees).....	247.70		
Swimming Tank for Women .....	46.25		
University Hospital, oil burning plant under boilers .....	1,729.83		
		\$16,566.56	
<b>Expenditures during the year on work in progress, paid from donations:</b>			
Anthropology Department of Affiliated Colleges, as per Donations from Mrs. Hearst:			
Erection of Totem Pole .....	\$601.73		
Fireproofing Museum .....	158.40		
Reconstruction of Museum .....	455.00		
<i>Carried forward</i> .....	\$1,215.13	\$16,566.56	\$1,480,860.75

<i>Brought forward</i> .....	\$1,215.13	\$16,566.56	\$1,480,860.75
Boalt Hall of Law .....	1,355.52		
Class of 1910 donation for footbridge over Strawberry Creek .....	1,307.15		
University Library Building (from the Doe Bequest) .....	9,995.02		
Girton Hall (from donations by Women's Senior Class) .....	3,967.22		
Marble Chair in Greek Theatre, erected from funds in the hands of the University, donated by the Class of 1905 .....	216.60		
New Roads north of Doe Library (from the donation by Mrs. Hearst) .....	1,500.00		
(Total expenditures during year were \$13,552.51, of which \$12,052.51 is charged against Permanent Building Fund.)			
Sather Gateway (from donation by Mrs. Sather) .....	3,669.07		
		23,225.71	
Expenditures on buildings, etc., from appropriations made by the State of California:			
University Farm:			
Buildings .....	\$41,950.81		
Light, Power, Water and Sewer .....	1,884.04		
		43,834.85	
Whittier:			
Barn and workshop .....	\$993.64		
Heating Plant .....	347.54		
Enlargement of Plant .....	3,971.31		
		5,312.49	
Riverside:			
Buildings and Lands .....		9,040.18	
Chico Forestry Station:			
Barn .....	\$499.90		
Fence .....	375.00		
		874.90	
Los Angeles:			
Hospital Unit for the Medical Department .....		4,675.60	
Building Operations (expenditures from Permanent Building Fund during year):			
Affiliated Colleges, Hospital heating ex- tension .....	\$29.88		
Affiliated Colleges, Medical Department alterations .....	1,471.30		
Affiliated Colleges, Veterinary and Med- ical Buildings .....	11.40		
<i>Carried forward</i> .....	\$1,512.58	\$103,530.29	\$1,480,860.75

## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$1,512.58	\$103,530.29	\$1,480,860.75
Affiliated Colleges, Veterinary and Hospital Buildings, electrical work .....	86.23		
Affiliated Colleges, new boiler .....	182.00		
Affiliated Colleges, repairs to Hospital ....	4.80		
Arch Line additions .....	897.09		
Bacon Library, alterations .....	12,042.37		
Botany Garden Tool House .....	282.90		
California Hall, altering floor lights .....	542.60		
California Hall, equipment .....	1,851.29		
California Hall, heating and ventilating attic .....	1,586.14		
Chemistry Auditorium .....	15,412.14		
Chemistry storehouse .....	318.47		
East Hall, alterations <sup>1</sup> .....	2,504.66		
Museum Vertebrate Zoology .....	390.86		
New roads, California Hall to Telegraph avenue .....	12.92		
New roads, La Loma wagon road .....	77.65		
New roads, north of Doe Library <sup>2</sup> .....	12,052.51		
President's House .....	2,770.13		
President's House, walks and roads .....	3,470.20		
Storehouse .....	728.43		
Tunnel .....	70.55		
Tunnel under new road .....	309.18		
Agriculture Hall, furnishings .....	1,542.54		
Boalt Hall, furnishings .....	22,007.83		
Chemistry Auditorium furnishings.....	16.37		
President's House, furnishings .....	1,305.92		
	<u>\$81,978.36</u>		
Agriculture Hall Building: Expenditures during year <sup>3</sup> .....	\$104,641.97		
University Library furnishings: Expenditures during year <sup>4</sup> .....	108,493.16		
		<u>295,113.49</u>	
Wilmerding School:			\$398,643.78
Running expenses .....	\$25,208.00		
New building (under construction by students) .....	4,141.82		
Street improvement .....	1,169.25		
		<u>\$30,519.07</u>	
			<u>\$30,519.07</u>
<i>Carried forward</i> .....			\$1,910,023.60

<sup>1</sup> Total expenditures during year, \$3,241.66, of which \$737 is met from General Funds.

<sup>2</sup> Total expenditures during year, \$13,552.51, of which \$1,500 is paid for out of donation by Mrs. Hearst.

<sup>3</sup> The total expenditure on this building to date is \$188,316.23; the appropriation from the Permanent Building Fund is \$200,000, to be charged in annual installments of \$20,000.

<sup>4</sup> The total expenditure on these furnishings to date is \$183,144.90; the appropriation from the Permanent Building Fund is \$200,000, to be charged in annual installments of \$20,000.

Brought forward ..... \$1,910,023.60

Turning over of funds:

Jane K. Sather Funds:

Sather Chair Fund, interest paid to Mrs. Sather .....	\$1,897.08	
Sather Law Library Fund, interest paid to Mrs. Sather .....	632.12	
Income on Class of 1909 Fund, paid to Secretary .....	39.61	
Income on Class of 1910 Fund, paid to Secretary .....	46.41	
Income on Alumnae Y. W. C. A. Fund, paid to Secretary .....	14.58	
Income on Y. W. C. A. Fund, paid to Secretary .....	122.22	
		\$2,752.02

Madame Thérèse F. Colin:

Payments to Madame Thérèse F. Colin..	\$66.31	
Appraising lots .....	5.00	
		71.31
Bills payable .....		20,000.00
Students' deposits returned .....		17,115.23
Expenditures on properties donated by Associated Students (these expenditures ultimately to be made good by them) .....		332.24
Military uniforms .....		10,901.80
Football Tickets .....		45.00
Certified checks accompanying bids on contracts returned to contractors .....		69,907.45
Deposits on plans .....		260.00

Bills Receivable:

Mortgage loans (consummated and renewed) .....	\$310,000.00	
Collateral loans (consummated and renewed) .....	160,000.00	
Kearney Vineyard: Advances Account..	3,000.00	
Student notes from Loan Funds .....	5,109.00	
		478,109.00

Contingent Fund:

R. P. Merritt .....	\$10,000.00
V. H. Henderson .....	2,000.00
W. W. Campbell .....	2,000.00
W. D. Armes .....	1,500.00
H. C. Moffitt .....	1,000.00
R. M. Roberts .....	300.00
W. C. Packard .....	300.00
J. C. Merriam .....	200.00

Carried forward .....\$17,300.00      \$599,494.05      \$1,910,023.60



## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....		\$17,300.00	\$599,494.05	\$1,910,023.60
A. L. Kroeber .....	129.63			
J. E. Coit .....	100.00			
G. A. Merrill .....	50.00			
			17,579.63	
Improvements, etc., on buildings, etc., held as investments:				
Johnson Building site .....	\$1,302.80			
Sacramento Building (Blake, Moffitt & Towne Building) .....	17,290.09			
Highland Tract lots, Berkeley:				
Commission on sale .....	80.00			
Quit claim deed .....	50.00			
Taxes .....	4.52			
Street work .....	5.90			
Broadway Terrace lots, Oakland:				
Street assessment, fencing, etc. ....	6,217.41		24,950.72	
Income, etc., on Savings Bank Deposits not withdrawn and treated as increase of investment:				
Central Savings Bank of Oakland ....	\$594.01			
First Federal Trust Co. of San Francisco .....	328.81		922.82	
Jane K. Sather Legacy: Payments made as follows:				
To Trustee for beneficiaries .....	\$34,225.00			
Street assessment on property at Fourteenth and Broadway, Oakland .....	8,000.00			
Taxes on property at Fourteenth and Broadway, Oakland .....	2,902.64			
Abstract of title on property at Fourteenth and Broadway, Oakland ....	125.00		45,252.64	
Valuations of properties:				
5 Bohemian Club Bonds received from S. C. Irving for endowing a Prize Fund .....	\$500.00			
4 Bohemian Club Bonds received from F. H. Powers as final payment on account of subscription to the Boalt Hall of Law (these bonds are treated as part of the investment of the Endowment Pool moneys) .....	400.00			
Whitaker Forest, Tulare Co., being 320 acres donated by Horace Whitaker .....	9,600.00			
<i>Carried forward</i> .....		\$10,500.00	\$688,199.86	\$1,910,023.60

*Brought forward* .....\$10,500.00      \$688,199.86      \$1,910,023.60

Real estate and improvements donated by Associated Students of the University of California (being nos. 2246 and 2248 College avenue, and no. 2644 Sylvan way; this figure is the cost paid by the A. S. U. C.) ..... 21,849.58

Real estate and improvements donated for the Hesse Memorial Scholarship Fund, being no. 157 Santa Clara avenue, Oakland) ..... 3,800.00

36,149.58

Properties, etc., received from the Jane K. Sather Trusts:

Valuation of property at Fourteenth and Washington street, Oakland..\$400,000.00

Mortgage given by the Beta Theta Pi Hall Association ..... 7,000.00

Deposits in the Savings Banks:

Central Savings Bank of Oakland, no. 24372 ..... 10,200.00

Central Savings Bank of Oakland, no. 17563 ..... 5,426.68

Central Savings Bank of Oakland, no. 14459 ..... 12,272.35

First Federal Trust Co., San Francisco, no. 2589 ..... 6,547.90

First Federal Trust Co., San Francisco, no. 2985 ..... 14,502.79

455,949.72

1,180,299.16

\$3,090,322.76

## RECEIPTS—REVENUE ACCOUNT

YEAR ENDING JUNE 30, 1912

(This represents income from the General Fund, i.e., of moneys not restricted to special purposes.)

State appropriations:		
State University Fund .....	\$567,020.78	
General support .....	100,000.00	
To reimburse income .....	9,000.00	
		<u>\$676,020.78</u>
Endowment Pool Income:		
On Consolidated Perpetual Endowment .....		118,924.07
Students' Deposits and Fees (net):		
Agriculture .....	\$586.50	
Astronomy .....	307.50	
Bacteriology .....	785.98	
Botany .....	713.75	
Chemistry .....	11,665.22	
Civil Engineering .....	3,156.50	
Mechanics .....	2,337.95	
Military Uniforms—Amounts not claimed .....	182.00	
Mineralogy .....	277.50	
Mining .....	1,299.75	
Physics .....	4,427.10	
Physiology .....	125.15	
Zoology .....	1,897.50	
Zymology .....	11.50	
Changing courses .....	275.50	
Delayed registrations .....	922.00	
Non-resident .....	4,555.00	
Special examinations .....	1,905.00	
		<u>34,931.40</u>
Interest on notes given for operations at Students' Infirmary .....		5.86
Summer Session of 1911 (a complete statement of receipts and expenditures is shown under the Expenditures of Revenue Account, q. v.)		
Examination of Schools .....		175.00
University Extension: Sale of Syllabus .....		5.40
Sundry rents:		
Cottages: Rents .....	\$3,427.91	
Less repairs .....	2,457.25	
		<u>970.66</u>
Such Ranch .....	418.50	
Seaman Cottage .....	15.00	
Lot 5, University Heights .....	3.00	
		<u></u>
Carried forward .....	\$1,407.16	\$830,062.51

# RECEIPTS—REVENUE ACCOUNT

485

<i>Brought forward</i> .....	\$1,407.16	\$830,062.51
Land, University Heights (Stanley lease) .....	75.00	
Potrero avenue lots .....	120.00	
Congressional land, Fresno County .....	10.00	
Congressional land, San Luis Obispo County .....	48.87	
		1,661.03
Medicine Fees, etc.:		
San Francisco and Berkeley .....	\$11,156.78	
Los Angeles .....	4,118.19	
		15,274.97
Chemistry:		
Supplies sold .....	\$72.40	
Analyses made .....	255.00	
		327.40
Civil Engineering: Tests, etc. ....		635.35
Dairying:		
Sale of produce .....	\$9,769.10	
Sale of cattle .....	11.64	
		9,780.74
Dentistry: Fees and miscellaneous receipts (net) .....		19,374.09
Library:		
Fines .....	\$50.40	
Books .....	55.28	
Periodicals .....	13.79	
Binding .....	1.20	
Freight and expense .....	23.18	
		143.85
Lick Observatory:		
Income on Endowment .....	\$5,245.93	
Rent: Morrow .....	80.00	
		5,325.93
Military Science: Belts .....		6.64
Mining: Sale of materials .....		3.28
Pathology: Sale of supplies .....		31.69
Physics: Sale of Geissler tubes .....		4.00
Political Science: Sale of Syllabus .....		23.65
Printing Office and Publications:		
Cash receipts for work done at Printing Office .....	\$1,026.50	
Sale of Publications .....	2,819.74	
Sale of Syllabus .....	6.65	
		3,852.89
Reimbursement for work done, supplies, etc.:		
University site .....	\$1,607.65	
Administration:		
Repairs .....	1,408.00	
Telephone, Telegraph and Express .....	510.72	
Salaries (Janitor) .....	296.05	
Writing letters (Appointment Secretary) .....	225.99	
Water .....	447.88	
Sale of junk .....	32.50	
<i>Carried forward</i> .....	\$4,528.79	\$886,508.02

## PRESIDENT'S BIENNIAL REPORT

<i>Brought forward</i> .....	\$4,528.79	\$886,508.02
Sale of wood .....	166.45	
Addressograph supplies, etc. ....	91.35	
Stationery .....	16.75	
Postage .....	37.68	
Electric Light and Power Department .....	640.13	
Miscellaneous .....	130.54	
		5,611.69
Contingent Fund for Anthropological Department heretofore treated as advanced from Budget allotment now treated as a Contingent Fund		129.63
Miscellaneous items applying to previous year's accounts carried to Revenue Account:		
University Farm Poultry sales .....	.23	
University Farm Support .....	23.30	
University Farm Creamery sales.....	3.85	
University Farm Grounds .....	15.58	
Southern California Pathological Laboratory.....	17.34	
Boalt Hall Building .....	8.00	
Wilmerding School expenses .....	50.76	
Student Infirmary .....	342.63	
		461.69
		<u>\$892,711.03</u>

## CHARGES—REVENUE ACCOUNT

YEAR ENDING JUNE 30, 1912

(This represents expenditures from the General Fund, i.e., of moneys not restricted to special purposes.)

<i>Agriculture:</i>		
Salaries .....	\$13,095.24	
Current expenses .....	7,932.44	
Forestry .....	1,499.93	
Entomology .....	1,076.65	
Bacteriology .....	403.30	
Education .....	2,073.14	
Purchase of cows for Dairy.....	1,060.00	
		\$27,140.70
<i>Anatomy:</i>		
Salaries .....	\$6,166.50	
Expenses .....	2,617.68	
		8,784.18
<i>Anthropology:</i>		
Salaries .....	\$ 5,540.00	
Expenses .....	3,560.37	
<i>Carried forward</i> .....	\$9,100.37	\$35,924.88



## CHARGES—REVENUE ACCOUNT

487

<i>Brought forward</i> .....	\$9,100.37	\$35,924.88
Excess cost over donation by Mrs. Hearst for erection of Totem Pole.....	101.73	
Excess cost over donation by Mrs. Hearst for recon- struction of Museum.....	50.00	
		9,252.10
Architecture:		
Salaries .....	\$8,439.84	
Expenses .....	1,041.12	
		9,480.96
Astronomy:		
Salaries .....	\$8,299.80	
Expenses .....	1,354.76	
		9,654.56
Botany:		
Salaries .....	\$11,579.88	
Expenses .....	5,096.60	
		16,676.48
Celtic:		
Salaries .....		600.00
Chemistry:		
Salaries .....	\$15,942.89	
Expenses .....	5,705.13	
		21,648.02
Civil Engineering:		
Salaries .....	\$13,199.22	
Expenses .....	9,152.15	
		22,351.37
NOTE.—“Expenses” are arrived at after allowing for \$830.29 for work done for other departments of the University; see also cash received for tests, etc., \$635.35.		
Dairying:		
Salaries .....	\$600.00	
Expenses .....	7,819.18	
		8,419.18
Dentistry:		
Salaries .....	\$11,783.05	
Expenses .....	11,954.38	
		23,737.43
Drawing:		
Salaries .....	\$8,399.76	
Expenses .....	40.04	
		8,439.80
Economics:		
Salaries .....	\$4,783.49	
Expenses .....	520.24	
		5,303.73
<i>Carried forward</i> .....		\$171,488.51

<i>Brought forward</i> .....		\$171,488.51
Education:		
Salaries .....	\$13,693.92	
Expenses .....	543.00	
		14,236.92
English:		
Salaries .....	\$25,349.76	
Expenses .....	453.69	
		25,803.45
Geography:		
Salaries .....	\$3,349.86	
Expenses .....	196.77	
		3,546.63
Geology and Mineralogy:		
Salaries .....	\$11,633.10	
Expenses .....	1,841.67	
		13,474.77
German:		
Salaries .....	\$14,666.16	
Expenses .....	391.08	
		15,057.24
Greek:		
Salaries .....	\$8,299.92	
Expenses .....	128.43	
		8,428.35
History:		
Salaries .....	\$23,582.82	
Expenses .....	2,699.07	
		26,281.89
Hygiene:		
Salaries .....	\$4,433.28	
Expenses .....	701.14	
		5,134.42
Irrigation:		
Salaries .....	\$4,099.92	
Expenses .....	710.26	
		4,810.18
Jurisprudence:		
Salaries .....	\$17,624.40	
Expenses .....	502.61	
		18,127.01
Latin:		
Salaries .....	\$16,399.80	
Expenses .....	356.88	
		16,756.68
Library:		
Salaries .....	\$27,914.02	
Assistance .....	5,317.68	
Equipment .....	757.58	
Expense .....	4,351.75	
Binding .....	6,010.05	
Books .....	14,936.68	
<i>Carried forward</i> .....		\$59,287.76
		\$323,146.05

## CHARGES—REVENUE ACCOUNT

489

Brought forward .....	\$59,287.76	\$323,146.05
Completing Sets .....	321.19	
Periodicals .....	5,882.92	
Freight, Expressage, Insurance, etc.....	957.72	
Depository Cataloguing .....	1,371.97	
Bancroft Library Cataloguing.....	1,500.00	
		69,321.56
Lick Observatory (subject to income from Endowment):		
Salaries .....	\$24,183.84	
Expenses .....	7,686.36	
		31,870.20
Mathematics:		
Salaries .....	\$22,932.84	
Expenses .....	1,126.00	
		24,058.84
Mechanics:		
Salaries .....	\$11,549.76	
Expenses .....	7,857.01	
		19,406.77
Medicine:		
San Francisco: Salaries .....	\$1,200.00	
San Francisco: Expenses .....	10,047.77	
Los Angeles Department: Running expenses.....	8,725.13	
Los Angeles Department: Repairs to buildings.....	1,274.87	
		21,247.77
(See cash received from Fees, etc.)		
Military Science:		
Salaries .....	\$799.92	
Expenses .....	2,213.72	
		3,013.64
(See also cash received for damage to accoutrements.)		
Mining:		
Salaries .....	\$11,899.80	
Expenses .....	4,361.30	
		16,261.10
(See also cash received from sale of supplies.)		
Music:		
Expenses .....		10.00
Oriental Languages:		
Salaries .....	\$3,320.73	
Expenses .....	97.60	
		3,418.33
Palaeontology:		
Salaries .....	\$5,299.92	
Expenses .....	300.00	
		5,599.92
Pathology:		
Salaries .....	\$10,599.84	
Expenses .....	3,531.69	
		14,131.53
(See also cash received from sale of supplies.)		
Carried forward .....		\$531,485.71

<i>Brought forward</i> .....		\$531,485.71
Philosophy:		
Salaries .....	\$6,424.92	
Expenses .....	867.40	
		7,292.32
Physical Culture:		
Salaries .....	\$6,136.49	
Expenses .....	1,000.00	
		7,136.49
Physics:		
Salaries .....	\$18,465.43	
Expenses .....	8,656.88	
		27,122.31
(See also cash received from sale of supplies.)		
Physiology:		
Salaries .....	\$8,019.96	
Expenses .....	3,375.00	
		11,394.96
Political Science:		
Salaries .....	\$6,665.88	
Expenses .....	467.23	
		7,133.11
(See also cash received from sale of syllabus.)		
Printing Office:		
Salaries .....	\$2,400.00	
Expenses .....	34,181.85	
		\$36,581.85
Less work done for departments.....	25,161.84	
		11,420.01
(See also cash receipts for work done.)		
Romanic Languages:		
Salaries .....	\$21,299.55	
Expenses .....	1,753.06	
		23,052.61
Sanskrit:		
Salaries .....		1,800.00
Semitic Languages:		
Salaries .....		1,999.92
Slavic Languages:		
Salaries .....	\$2,199.96	
Expenses .....	25.56	
		2,225.52
University Extension:		
Expenses .....		10.00
<i>Carried forward</i> .....		\$632,072.96

## CHARGES—REVENUE ACCOUNT

491

Brought forward ..... \$632,072.96

## University Site:

Expenses .....	\$23,690.05	
Less work done for departments.....	7,082.40	
		16,607.65

(See also cash receipts for reimbursement for labor, etc.)

## Zoology:

Salaries .....	\$12,349.84	
Expenses .....	4,203.00	
		16,552.84

University Hospital: Excess of expenditures over receipts ..... 19,996.68

## Administration:

Salaries:		
Advisors .....	\$3,500.00	
Janitors .....	33,118.35	
President's Contingent .....	3,000.00	
Administration.....	44,536.32	
		\$84,154.67
Fellowships .....	4,000.00	
Expenses (for details see page 470) .....	41,416.60	
Short in taking in cash.....	24.50	

## Electric Light and Power:

Maintenance: Salaries .....	\$3,600.00	
Maintenance: Expenses .....	37,036.71	
Current Repairs .....	1,996.35	
Reconstruction .....	1,254.21	
		43,887.27

NOTE.—Work done for other departments (\$222.80) is deducted from this figure; see also cash receipts, \$640.13.

Repairs: Expenses.....	\$54,233.14	
Less work done for other depts., etc.....	35,353.73	
		18,879.41

(See also cash receipts for work done, etc.)

Water .....	8,346.39
Publications .....	10,150.72
Equipment .....	3,586.19
Fuel .....	1,945.10

Storehouse: Net cost of operation and maintenance (for six months) after allowing for inventory of merchandise on hand.....	608.05
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Telephone, Telegraph and Expressage.....	5,979.11
Postage .....	2,775.46
Auditing .....	2,052.90
Lectures .....	425.00

Carried forward ..... \$228,231.37      \$685,230.13



<i>Brought forward</i> .....	\$228,231.37	\$685,230.13
Stationery .....	1,380.55	
Examination of Schools.....	2,151.73	
Bancroft Library: Expense.....	1,023.00	
Bancroft Library: Excess of expenditures over income to date on the Academy of Pacific Coast History....	3,799.93	
Affiliated Colleges: Repairs and maintenance of grounds	2,669.87	
		\$239,256.45
Summer Session of 1911: Net transfer to this account.....		32.29

This item is made up as follows:

Net fees from Summer Session: This is  
after allowing for \$1,753 transferred  
to Infirmary Fees Account, being \$1  
on each complete \$15 fee retained ..... \$27,709.75

Net amounts retained from other fees and  
deposits as follows:

Medicine .....	30.00
Bacteriology .....	92.50
Botany .....	97.50
Chemistry .....	846.66
Home Economics .....	282.25
Manual Training .....	375.28
Physics .....	325.15
Psychology .....	14.00
Zoology .....	77.00
Donation towards salary .....	41.67

\$29,891.76

Total expenditures..... 25,537.94

Excess of receipts over expenditures ..... \$4,353.82

\*Amount transferred to Summer Session

Endowment Fund ..... 4,386.11

Deficit charged to Revenue ..... \$32.29

Interest on Daily Balances:

The Endowment Pool is credited with  
interest at the Endowment Pool rate  
for the previous half-year on average  
daily balance of investment moneys on  
hand, which amounted for the first  
half-year, at 6.24237 per cent per an-  
num, to ..... \$6,191.90

*Carried forward* ..... \$6,191.90

\$924,518.87

\* It was voted to transfer \$6,000 to create a Sum-  
mer Session Endowment Fund; \$1,613.89 came from  
the surplus of 1910 account.

## CHARGES—REVENUE ACCOUNT

493

Brought forward .....	\$6,191.90	\$924,518.87
For the second half-year at 5.8176901 per cent per annum.....	10,955.30	
	<hr/>	\$17,147.20
Less amount received from Treasurer for interest at 2 per cent per annum on daily balances.....	6,186.91	
	<hr/>	\$10,960.29

(This is equivalent to saying that the General Fund has borrowed money from the Investment Fund, paying 6.24237 per cent per annum for it for the first half year, and 5.8176901 per cent per annum for the second half year.)

Amount credited to D. O. Mills Endowment Fund, being excess of income of the Mills Endowment over half the expenses on Philosophy for the year ending June 30, 1911 .....	\$2,938.53	
Redemption of taxes on Sylvan Way property.....	55.04	
Second installment of taxes on Sylvan Way property.....	33.55	
	<hr/>	3,027.12

Expenditures on erection of buildings during year:		
Affiliated Colleges: Fire precautions .....	\$521.52	
Affiliated Colleges: Rewiring buildings.....	2,677.74	
Affiliated Colleges: Oil burning plant at University of California Hospital .....	1,729.83	
Civil Engineering Building: Alterations.....	190.75	
Civil Engineering Building: Testing laboratory.....	3,327.68	
East Hall: Alterations.....	737.00	
Rewiring buildings on Campus.....	158.99	
South Hall: Alterations.....	1,879.00	
Women's Swimming Pool.....	46.25	
	<hr/>	11,268.76
		<hr/>
		\$949,775.04
		<hr/>

## SUMMARY OF REVENUE ACCOUNT

Charges for 1911-1912.....	\$949,775.04
Receipts for 1911-1912.....	892,711.03
	<hr/>
Excess of charges over receipts .....	\$57,064.01
Balance on hand at June 30, 1911.....	41,657.45
	<hr/>
Overdraft at June 30, 1912 .....	\$15,406.56
	<hr/>

# SCHEDULES REFERRED TO IN THE BALANCE SHEET FOR JUNE 30, 1912

## A. REAL ESTATE IN BERKELEY.

NOTE.—Italics indicate a gift.

<i>Campus lands</i> (given by the College of California and its friends) .....	\$1,000,000.00
<i>Hearst Hall site and Hearst Cottage site</i> (the gift of Mrs. Phoebe A. Hearst) .....	7,000.00
Hillegass Tract .....	194,991.04
Palmer House site (on Piedmont Avenue).....	17,500.00
Watershed Lands (in Strawberry Canon).....	167,632.84
Sylvan Way property (buildings and lands), purchased for the Campus .....	15,395.00
<i>Sylvan Way and College Avenue</i> (buildings and lands) donated by the Associated Student Body for the Campus.....	21,849.58
	<hr/>
	\$1,424,368.46

## B. BUILDINGS AND IMPROVEMENTS IN BERKELEY.

In active use for University purposes:

Acid House .....	\$480.00
Agricultural Building .....	7,200.00
Agricultural Hall: Expenditures to June 30, 1912.....	188,316.23
Anatomical Laboratory and Printing Office.....	6,400.00
Architectural Building .....	12,248.08
<i>Bacon Library Building</i> (for this Henry Douglass Bacon gave \$25,000) .....	60,515.74
Bacteriological Laboratory .....	480.00
Barns .....	2,000.00
<i>Boalt Hall of Law</i> : Expenditures to June 30, 1912 (for this Mrs. Boalt has given \$100,000 and the lawyers of California have subscribed \$50,000; balance to be paid from Permanent Building Fund) .....	159,031.06
Botany Building .....	5,600.00
<i>Bridge at Faculty Club</i> .....	1,387.92
Bridge at Football Statue.....	3,384.33
Bridge at Sather Gate.....	10,922.86
<i>California Field</i> (improvements of football grounds: built by the Associated Students) .....	20,000.00
California Hall .....	271,711.33
Carpenter's Shop, building and machinery.....	4,033.19
Cement sidewalks .....	596.25
Chemistry Auditorium .....	15,412.14
Chemistry Building .....	81,000.00
Chemistry Storehouse .....	318.47
<i>Cinder Path</i> (old athletic path: built by the Associated Students)....	1,000.00
Civil Engineering Hall.....	38,582.61
	<hr/>
<i>Carried forward</i> .....	\$890,620.21

## BALANCE SHEET—SCHEDULES

495

<i>Brought forward</i> .....	\$890,620.21
Civil Engineering Laboratory.....	2,400.00
Civil Engineering Testing Laboratory.....	6,981.77
Conservatory .....	10,800.00
Dairy Barn .....	2,400.00
Dairy Milk House, equipment, etc. ....	4,160.60
Manure Pit .....	1,031.15
East Hall .....	18,000.00
Entomological Laboratory .....	2,569.99
<i>Faculty Club</i> (built by the Faculty Club).....	12,000.00
Fertilizer Control Laboratory .....	14,615.29
<i>Girton Hall</i> .....	4,032.34
<i>Greek Theatre</i> (the gift of William Randolph Hearst).....	45,000.00
<i>Harmon Gymnasium</i> (the original building was the gift of A. K. P. Harmon) .....	50,181.89
<i>Hearst Hall</i> (the gift of Mrs. Phoebe A. Hearst).....	35,978.30
<i>Hearst Memorial Mining Building</i> (the gift of Mrs. Phoebe A. Hearst as a memorial to her husband, Senator George Hearst).....	644,400.00
Hog Pens, etc., in Strawberry Cañon for Hog Serum work.....	4,205.36
Hygiene and Pathology Laboratory .....	24,940.02
Landscape Gardening (grading, walls, etc.).....	3,118.85
Mechanics Building .....	61,025.00
<i>John Mitchell Monument</i> (erected by the University Cadets) .....	358.95
<i>Museum Building, Archaeology</i> (the gift of Mrs. Phoebe A. Hearst) .....	3,667.77
New permanent roads.....	74,378.83
North Hall .....	20,000.00
Philosophy Building .....	8,000.00
Plant Houses .....	957.00
Platform Scales .....	350.00
Power, Light and Heat Plant:	
Central Station: Building and machinery.....	\$73,421.29
Workshop for Electric Light and Power Dept.....	1,040.40
Electric construction on Campus.....	9,430.68
Heating System (exclusive of Central Station).....	42,347.16
	126,239.53
President's House (expenditures to June 30, 1912).....	113,868.35
Rifle Range .....	501.90
<i>Sather Gateway</i> (expenditures to June 30, 1912, from gift of Mrs. Jane K. Sather) .....	35,797.16
<i>Senior Hall</i> (given by the Order of the Golden Bear).....	4,676.98
Shops (carpenter, painter, etc.).....	1,200.00
South Hall .....	126,000.00
<i>Rudolph Spreckels Temporary Physiological Laboratory</i> (the gift of Rudolph Spreckels).....	25,000.00
Storehouse (Grounds and Buildings Department).....	635.53
Storehouse (General) .....	728.43
Strawberry Cañon weir .....	569.80
Students' Infirmary .....	16,830.41
Students' Observatory .....	8,000.00
Swimming Tank .....	17,200.00
<i>Carried forward</i> .....	\$2,423,421.41

<i>Brought forward</i> .....	\$2,423,421.41
Tennis Courts .....	21,970.89
Tool House in Botany Garden.....	282.90
Trunk sewer .....	6,356.10
<i>University Library</i> (built out of the Charles Franklin Doe bequest)....	682,333.40
Viticultural Laboratory .....	400.00
<i>Zoology, California Museum of Vertebrate</i> (Miss Annie M. Alexander gave \$7,000 toward the cost of this building).....	15,094.31
Dwellings rented:	
<i>Hearst Cottage</i> , College avenue (given by Mrs. Phoebe A. Hearst) .....	\$2,750.00
Palmer House (Piedmont Avenue) .....	2,500.00
University Cottages (Allston Way).....	9,600.00
	<hr/> 14,850.00
	<hr/> \$3,164,709.01

## C. REAL ESTATE AND IMPROVEMENTS NOT IN BERKELEY.

## Utilized for University purposes:

## San Francisco:

Affiliated Colleges (the land was given by Adolph Sutro) .....	\$405,707.74
<i>San Francisco Institute of Art</i> (the gift of Edward F. Searles) .....	235,150.00

## Wilmerding School:

New building .....	\$46,616.64
Old building .....	24,906.46
Real estate .....	59,463.05
	<hr/> 130,986.15

771,843.89

## Lick Observatory:

<i>Lands, Buildings and Equipment</i> .....	\$610,000.00
Holden Tract .....	511.25
Cook Tract .....	960.00
Hartzoke Tract .....	262.73
Duckworth Tract .....	316.42
Electric Light and Power Plant.....	11,606.23
Photographic Vault .....	19,834.70
Tank .....	2,701.00
Barn .....	1,254.95
Dormitory and Cottages—Expenditures to June 30, 1912: on account of earthquake replacement.....	7,349.54
	<hr/> 654,796.82

## Pacific Grove:

<i>Real Estate of Herzstein Seaside Laboratory</i> (given by Dr. M. Herzstein) .....	2,500.00
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## Davis (University Farm):

Lands .....	\$103,290.00
Water right .....	3,895.53

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*Carried forward* .....\$107,185.53 \$1,429,140.71



<i>Brought forward</i> .....	\$107,185.53	\$1,429,140.71
Dairy Building and Livestock Pavilion .....	\$32,303.73	
Cottages Nos. 1 and 2.....	7,951.45	
Cottages for foreman .....	3,400.00	
Workshops .....	6,529.50	
Brooder House .....	1,500.00	
Seed House .....	3,913.00	
Poultry House .....	5,368.00	
Sewerage and water systems.....	18,279.00	
Dining Room Building .....	12,606.45	
Dormitory No. 1.....	28,000.00	
Dormitory No. 2.....	33,394.00	
Sheep Barn .....	4,530.00	
Horse Barn .....	6,880.00	
Horticultural Building .....	19,163.00	
Dairy Barn .....	17,338.00	
Silo .....	1,537.50	
Veterinary Science Building .....	7,600.00	
Office Building .....	6,907.00	
Viticulture Grafting Building.....	400.00	
Miscellaneous .....	31,251.53	
	<u>248,852.16</u>	
		356,037.69
<i>Southern California Pathological Laboratory:</i>		
Real Estate at Riverside .....	\$2,500.00	
Buildings at Riverside .....	10,540.18	
Buildings at Whittier .....	12,821.31	
	<u>25,861.49</u>	
<i>Imperial Valley:</i>		
Buildings at Meloland.....		3,021.53
<i>Kearney Estate</i> (5,400 acres near Fresno, bequeathed by M. Theo. Kearney) .....		1,000,000.00
<i>Los Angeles Medical Department:</i> Lands, Buildings and Equipment (given by the Los Angeles College Clinic Association) .....	\$100,000.00	
Hospital Buildings: Cost to June 30, 1912.....	4,675.60	
	<u>104,675.60</u>	
<i>Other Real Estate:</i>		
*Congressional Lands .....	11,818.27	
†Public Building Lands .....	800.00	
Potrero Avenue lots (originally bought for the Medical Department) .....	10,364.39	
<i>Real Estate in Tulare Country:</i> Whitaker forest .....	9,600.00	
	<u>32,582.66</u>	
		<u>\$2,951,319.68</u>

\* This is 3954.47 acres of land still on hand from the original grant of 150,000 acres; all have once been sold, but these have come back to the University by foreclosure or cancellation of contracts.

† This is 320 acres of land still on hand from the original grant of 6400 acres; all have once been sold, but these have come back to the University by foreclosure or cancellation of contracts.

## D. INVESTMENTS

Bills Receivable, Bonds, Stocks, and Real Estate, etc.

## Bills Receivable:

Mortgage loans .....	\$1,109,397.01	
Collateral loans .....	10,000.00	
J. B. Reinstein (note as donation for University Hospital) .....	1,000.00	
Loans from the Class of 1886 Loan Fund .....	2,241.30	
Loans from the Class of 1895 Loan Fund .....	630.00	
Loans from the Class of 1898 Loan Fund .....	200.00	
Loans from the Class of 1903 Loan Fund .....	1,027.00	
Loans from the Class of 1909 Loan Fund .....	1,120.00	
Loans from the Class of 1911 Loan Fund .....	625.00	
Loans from the E. A. Denicke Loan Fund .....	1,300.00	
Loans from the Grubstake "W" Loan Fund .....	373.30	
Loans from the Medal Loan Fund .....	159.82	
Loans from the Special Senior Class Loan Fund .....	675.00	
Loans from the Walton Memorial Loan Fund .....	872.00	
		<hr/>
		\$1,129,620.43

## Savings Bank Deposits:

Central Savings Bank of Oakland .....	\$28,493.04	
First Federal Trust Company of San Francisco .....	21,379.50	
		<hr/>
		49,872.54

## Bonds:

Bear Gulch Water Company (par value) .....	\$164,000.00	
Bohemian Club Bonds (par value) .....	900.00	
Montgomery Avenue Bonds (par value \$22,000) .....	1.00	
Oakland Traction Consolidated (par value \$15,000) ..	14,662.50	
Sacramento Electric Gas and Railway Co. (par value \$1,000) .....	1,020.00	
Southern Pacific Railroad 1st Mortgage Refunding 4 per cent Gold Bonds (par value \$33,000) .....	32,937.50	
State Treasurer (vide Cal. Stats. 1899:93) .....	751,000.00	
State Treasurer: Diverted Funds (vide Cal. Stats. 1899:93) .....	79,750.00	
Tonopah United Water Company Bonds (par value) ..	20,000.00	
		<hr/>
		1,064,271.00

## Stocks:

Weinstock-Lubin Real Estate Co. (500 shares preferred, par value \$5,000) .....	\$5,000.00	
Fireman's Fund Insurance Co. (100 shares common, par value \$10,000) .....	21,000.00	
Sather Banking Company (200 shares Sather Banking Company, common stock, par value \$20,000; in liquidation) .....	2,400.00	
Mackay Companies (704 shares preferred, par value \$70,400) .....	50,000.00	
*Kennedy Mining and Milling Co. (1,200 shares common, par value \$120,000) .....	1.00	

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Carried forward ..... \$78,401.00 \$2,243,763.97

\*These stocks were received in April, 1907, as part of distribution of Doe Estate. They were valued at \$6,000, and dividends as received were credited to this valuation.

## BALANCE SHEET—SCHEDULES

499

<i>Brought forward</i> .....	\$78,401.00	\$2,243,763.97
Bank of California (100 shares, par value \$10,000)....	20,550.00	
University Land and Improvement Co., Cloyne Court (2,500 shares common, par value \$2,500).....	2,500.00	
Stocks, Notes and Mining Claims (Thompson Fund).. .....	1.00	
		101,452.00

NOTE.—The University of California also holds \$400,000 stock of the Bear Gulch Water Company not valued on the books.

## Real Estate and Improvements:

Real Estate in West Berkeley (4 lots on Sixth Street) \$	2,083.11
Real Estate in Escondido (76 acres) .....	2,000.00
Real Estate in Menlo (1,390 acres).....	20,763.25
Real Estate in Oakland (14th and Washington).....	400,000.00
Real Estate in Oakland (157 Santa Clara Avenue)....	3,800.00
Real Estate in Oceanside (75 x 100 feet).....	1,800.00
Real Estate in Redlands .....	5,714.10

## Real Estate in San Francisco:

Johnson Building site .....	\$400,000.00
Johnson Building Reconstruction.....	2,839.00
Sacramento Building and site .....	309,396.93
	712,235.93

Real Estate on Dearborn St., Chicago (Thompson bequest) 50,000.00

Real Estate in Salt Lake City (Lot 6, Block 12, Plot E)  
(Thompson bequest) ..... 3,500.00

1,201,896.39

## Balance of contracts for sale of real estate (80 feet on

Eunice St., North Berkeley)..... 800.00

Broadway Terrace lots, Oakland..... 61,000.00

61,800.00

\$3,608,912.36

E. DEPARTMENTAL ACCOUNTS AND OTHER EXPENDITURES CARRIED  
FORWARD TO YEAR 1912-1913.

Anthropology .....	\$100.00
Bancroft Library Expense .....	76.07
Chemistry .....	5.44
Chemistry: Special equipment appropriations.....	1,328.61
Civil Engineering .....	1,668.37
Electric Light and Power: General construction.....	8,209.41
Equipment .....	441.00
Geography .....	11.70
Geology and Mineralogy .....	9.70
Lick Observatory .....	412.25
Lick Observatory Printing .....	1,161.59
Los Angeles Medical Department.....	2,465.51
Palaeontology .....	63.41
Pathology and Bacteriology .....	270.60
<i>Carried forward</i> .....	\$16,223.66

<i>Brought forward</i> .....	\$16,223.66
Physical Culture .....	100.35
Physics .....	337.04
Physiology and Physiological Chemistry.....	459.26
Repairs .....	476.15
Site .....	922.06
Storehouse .....	1,837.77
Zoology .....	165.16
Summer Session: Civil Engineering.....	1,886.26
Agricultural Experiment Station Sales Fund.....	1,071.33
Cereal Sales .....	252.05
Forestry Sales .....	111.65
University Farm: Dormitory account.....	438.68
State Appropriation; Viticulture investigations.....	93.42
Swimming Tank: Expenditures to be made good ultimately from receipts of Gymnasium Fees .....	11,473.27
Bath House and Equipment: Expenditures to be made good ultimately from receipts of Gymnasium Fees .....	3,047.45
Class of 1907 Permanent Endowment Fund Interest: for purchase of books .....	20.14
E. A. Denicke Library Fund Interest.....	8.47
Expenditures on the erection and furnishing of buildings, paid out of Permanent Building Fund moneys: to be made good by charges against that fund in annual installments of \$20,000 for each enterprise:	
Agricultural Hall: Erection of Building:	
Total expenditures to date.....	\$188,316.23
Less charged to Permanent Building Fund.....	60,000.00
	128,316.23
Doe Library: Furnishing and Equipment:	
Total expenditures to date.....	\$183,144.90
Less charged to Permanent Building Fund.....	60,000.00
	123,144.90
	<hr/>
	\$290,385.30

There is also an amount of \$107,632.84 for expenditures on purchase of Watershed Lands, to be charged to the Permanent Building Fund in annual installments of \$20,000.

#### F. AMOUNTS DUE FROM THE STATE OF CALIFORNIA UNDER VARIOUS APPROPRIATIONS.

General Support .....	\$25,000.03
Reimbursement of Income .....	15,500.00
Chair of Music .....	1,499.94
Los Angeles Medical Department: Erection of Hospital.....	4,675.60
Hog Cholera Serum .....	1,376.16
Insecticides and Fungicides .....	2,331.52
University Farm: Buildings .....	13,351.32
	<hr/>
<i>Carried forward</i> .....	\$63,734.57

<i>Brought forward</i> .....	\$63,734.57
University Farm: Equipment .....	2,192.07
University Farm: Implements, etc. ....	442.39
University Farm: Improvements of grounds .....	1,307.15
University Farm: Light, water, power and sewer.....	1,757.91
University Farm: Livestock .....	33.30
University Farm: Salaries .....	13,546.91
University Farm: Support .....	12,498.32
Imperial County Investigations .....	9,347.97
Southern California Pathological Laboratory.....	7,764.94
Southern California Pathological Laboratory Equipment.....	895.98
Riverside Buildings and Lands .....	5,518.49
Whittier: Erection of barn.....	28.75
Whittier: Heating plant .....	347.54
Whittier: Enlargement of plant.....	3,412.94
Chico: Barn.....	7.90
Chico: Fence .....	30.82
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	\$122,867.95
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## G. ENDOWMENT FUND ACCOUNTS.

Alumnae of Young Women's Christian Association of the University of California Fund (income to be devoted to the payment of salary of the secretary of the undergraduate Y. W. C. A. of the University of California) .....	\$600.00
Alumni Association: Life Membership Fund (income for use of Alumni Association) .....	3,775.98
Alumni Hall Fund (gifts of Alumni for building of a Student Clubhouse) .....	9,138.30
Alumnus Book Fund .....	500.00
Class of 1874 Library Fund.....	52.91
Class of 1881 Loan Fund.....	1,032.56
Class of 1886 Loan Fund.....	4,486.47
Class of 1887 Library Fund.....	350.00
Class of 1895 Loan Fund.....	105.08
Class of 1897 Library Fund.....	654.56
Class of 1898 Loan Fund.....	203.44
Class of 1900 Library Fund.....	618.50
Class of 1902 Library Fund.....	125.00
Class of 1903 Loan Fund.....	1,098.47
Class of 1905 Fund (to be spent on a memorial bench and chair).....	72.09
Class of 1907 Permanent Endowment Fund (income for the purchase of books) .....	500.00
Class of 1907 Permanent Endowment Fund (income for the benefit of the class) .....	150.00
Class of 1908 Fund (income for the benefit of the class).....	255.96
Class of 1909 Endowment Fund (income for the benefit of the class).....	600.00
Class of 1909 Loan Fund (income for the benefit of the class).....	1,200.00
Class of 1910 Endowment Fund (income for the benefit of the class).....	1,350.00
P. Charles Cole Scholarship Fund.....	2,256.67
	<hr/>
<i>Carried forward</i> .....	\$29,125.99



<i>Brought forward</i> .....	\$29,125.99
Thérèse F. Colin European Fellowship Fund (given by Prof. Thérèse F. Colin for European study in French).....	10,961.94
Class of 1911 Fund (income for the benefit of the class).....	600.00
Class of 1911 Loan Fund (income for the benefit of the class).....	1,192.90
Class of 1912 Fund (income for the benefit of the class).....	1,900.00
Consolidated Perpetual Endowment Fund (sale of lands under Federal and State grants, savings of income, etc.).....	2,062,692.18
Emily Chamberlain Cook Prize Fund (given by Prof. Albert S. Cook as a memorial to his wife, for an annual prize for a poem).....	1,137.19
W. R. Davis Scholarship Fund.....	5,000.00
E. A. Denicke Library Fund (given by former Regent Ernest A. Denicke)	2,000.00
E. A. Denicke Loan Fund.....	5,188.61
Dental Endowment Fund.....	4,881.46
Doe Library Fund (bequeathed by Charles Franklin Doe; this is the balance after providing for the expenditure on erection of building up to June 30, 1912, which amounted to \$682,333.40).....	65,163.87
Cora Jane Flood Endowment Fund (gift of Miss Flood for the College of Commerce) .....	346,241.83
James M. Goewey Scholarship Fund.....	12,415.50
Grubstake "W" Loan Fund (given by anonymous friend).....	372.69
Hamerslag Loan Fund (income only to be used for loans to students)....	6,000.00
Hesse Memorial Scholarship Fund.....	3,800.00
Charles M. Hitchcock Endowment Fund (for lectures upon scientific and practical subjects) .....	10,000.00
Cornelius B. Houghton Scholarship Fund.....	3,000.00
S. C. Irving Prize Fund.....	500.00
Albert Sydney Johnston Memorial Scholarship Fund.....	3,500.00
Jucksch Donation (gift of Mary Jucksch: the income is used for purchase of books in American history).....	600.00
*Kearney Bequest (cash) .....	831.57
Martin Kellogg Fellowship Endowment Fund (given by Mrs. Martin Kellogg for a fellowship at the Lick Observatory).....	20,000.00
Leona Lebus Endowment Fund (given by Mrs. Martha C. Lebus in fulfillment of the will of her daughter, Miss Leona Lebus; the income is for the care at the University of California Hospital of chronic cases, preferably non-residents of San Francisco).....	4,000.00
Le Conte Memorial Fellowship Fund (given by the Alumni Association in memory of John and Joseph Le Conte).....	10,026.47
Lick Observatory Fund (balance remaining of the bequest of James Lick after erection and equipment of the Observatory).....	90,018.16
John W. Mackay Jr. Endowment Fund (given half by Mrs. John W. Mackay and half by Clarence Hungerford Mackay as an endowment for electrical engineering) .....	100,000.00
<i>Carried forward</i> .....	\$2,801,150.36

\*\$25,000 was received in cash from the distribution of the M. Theo. Kearney Estate. Certain claims, etc., against the estate have been liquidated out of this amount. Whatever balance has been in this fund has been loaned to the Kearney Vineyard Company without interest.

*Brought forward* ..... \$2,801,150.36

Massachusetts Relief Fund (moneys given by the citizens of Massachusetts for relief after the San Francisco fire of 1906, and, by their request, granted by the San Francisco Relief and Red Cross funds for the endowment of the University of California Hospital)	100,000.00
Medal Loan Fund (proceeds from the sale of University medals refused by Joseph B. Garber, class of 1892; Miss Katherine Felton, class of 1895, and Arthur M. Seymour, class of 1891, the medalists of their respective classes)	296.45
Men's Dormitory Fund (given by the students, etc.)	389.20
Eugene Meyer Jr. Library Endowment (for historical books)	2,000.00
D. O. Mills Endowment Fund (given by D. O. Mills for the endowment of a Professorship of Intellectual and Moral Philosophy and Civil Polity)	160,988.61
Napa Seminary Loan Fund	308.32
Paget Scholarship Fund (bequeathed by Mme. Emmanuel Marie Paget for the Professor F. V. Paget Scholarship for a student in French)	3,009.09
Philo Sherman Bennett Prize Fund (given by William Jennings Bryan for an essay on the Principles of Free Government)	574.35
Frank M. Pixley Scholarship Fund (bequeathed by Amelia V. R. Pixley for a scholarship for a student in law)	3,563.22
Prytanean Hospital Fund (gift by Prytanean Society for the equipment of the Student Infirmary)	1,014.38
Michael Reese Library Fund (gift of Michael Reese; income to be used for the purchase of books)	50,000.00
Richardson Latin Translation Prize Fund (bequeathed by Professor George Morey Richardson; income for prize in Latin translation)	1,600.00
Hermann Royer Endowment Fund (bequeathed by Hermann Royer for founding a Professorship of Political Economy)	3,875.73
Sheffield Sanborn Scholarship Fund (given by Mrs. James Horsburgh, Jr., to endow one scholarship in medicine and one in law at Berkeley and one in law at the Hastings College of Law)	15,000.00
Jane K. Sather Classical Chair Fund (the gift of Mrs. Jane K. Sather for the endowment of a chair of classical literature; any income remaining unused at the end of each fiscal year is to be added to the principal)	102,918.79
Jane K. Sather Historical Chair Fund (the gift of Mrs. Jane K. Sather for the endowment of a chair of history; any income remaining unused at the end of each fiscal year is to be added to the principal)	102,918.79
Jane K. Sather Law Library Fund (the gift of Mrs. Jane K. Sather; income to be devoted to the support of a law library)	21,543.35
Jane K. Sather Library Fund (the gift of Mrs. Jane K. Sather; income to be devoted to support in law library)	10,000.00
Jane K. Sather Historical Library Fund (the gift of Mrs. Jane K. Sather; income to be devoted to the purchase of historical books for the library)	12,461.68
Jane K. Sather Fund for the erection of Campanile and Bells (the gift of Mrs. Jane K. Sather; the principal to be used for the erection of the campanile and bells; income to be added to the Jane K. Sather Fund awaiting distribution)	225,000.00

*Carried forward* ..... \$3,618,612.32

<i>Brought forward</i> .....	\$3,618,612.32
Jane K. Sather Fund awaiting distribution (the gift of Mrs. Jane K. Sather; income to be added to the principal; the principal of this fund will be utilized for further payments that may have to be made to beneficiaries or for inheritance taxes, or for the completion of the Sather Gate if more is needed for that purpose or for anything in the nature of expenditures that would reduce the capital to the amount donated to the University by Mrs. Jane K. Sather. What is eventually left in this fund will be divided equally between the Jane K. Sather Historical Chair Fund and the Jane K. Sather Classical Chair Fund) .....	51,485.47
Special Senior Class Loan Fund (donated for the purpose of providing loans to Senior students during the fiscal year ending June 30, 1912; loans are made without interest; the total fund ultimately to be returned to the donor) .....	1,018.35
Students' Co-operative Society Fund (this is the surplus of the Students' Co-operative Society which has been placed in the hands of the University. The University guarantees interest on this at 5 per cent per annum, this interest to accumulate semi-annually and the money to be available to be withdrawn when the Students' Co-operative Society may so desire) .....	11,306.95
Summer Session Endowment Fund (this is part of the surplus of the session of 1911 which has been set apart as an endowment fund; income to be used for the purpose of purchasing special equipment) .....	6,000.00
Willard D. Thompson Memorial Scholarship Fund (the gift of Mrs. Jennie D. Thompson as a memorial to her son, Willard D. Thompson '94, the income to be used for scholarships for students from the State of Utah) .....	51,725.73
Edward Tompkins Endowment Fund (the gift of Edward Tompkins for the foundation of the Agassiz Professorship of Oriental Languages and Literature) .....	107,282.14
University Hospital Endowment Fund.....	649.68
University Hospital Endowment Fund (J. B. Reinstein).....	1,000.00
University Hospital Endowment Fund (given by the San Francisco Maternity) .....	10,000.00
University Medal Fund (given by friends of the University of California; the income to be used to give a medal to the most distinguished scholar of each year) .....	3,896.00
Vetlin Endowment Fund (given by the students of the Vetlin School; the income to be used for the Student Infirmary).....	1,000.00
Frank J. Walton Memorial Loan Fund (given by the Class of 1883 as a memorial to their classmate. The income only from this fund is to be loaned to students. When the fund shall exceed the sum of \$20,000, scholarships at Berkeley may be established out of the surplus) .....	6,031.62
Barbara Weinstock Lectureship Fund (the gift of Colonel H. Weinstock, in memory of his mother, for an annual lecture on "The Morals of Trade") .....	5,000.00
Whiting Fund (bequeathed by Professor Harold Whiting; the income to be expended for the benefit of the Department of Physics).....	22,500.00
<i>Carried forward</i> .....	\$3,897,508.26

## BALANCE SHEET—SCHEDULES

505

Brought forward ..... \$3,897,508.26

J. Clute Wilmerding Endowment Fund (bequeathed by J. Clute Wilmerding for the establishment and endowment of the Wilmerding School of Industrial Arts).....	449,000.00
Women's Dormitory Fund .....	2,066.17
Young Women's Christian Association Endowment Fund (income payable to the Y. W. C. A. to be used in payment of salary of a secretary) .....	5,000.00
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	\$4,353,574.43

NOTE.—The relation between the total endowments and the total of investments as appearing in the balance sheet, is shown as follows:

Investments .....	\$3,608,912.36
Loss on Montgomery Ave. bonds (litigation is now in progress to recover this amount).....	21,999.00
Loss on Highland Tract lots.....	296.71
Endowment Fund moneys loaned at interest to the Permanent Building Fund .....	375,507.50
Endowment Fund moneys loaned at interest to the General Fund .....	412,277.07
	<hr/>
	\$4,418,992.64
Endowment Funds .....	\$4,353,574.43
Gains in Endowment Pool Investments.....	65,418.21
	<hr/>
	\$4,418,992.64

H. BALANCES ON HAND IN FUND INTEREST ACCOUNTS, WHICH ARE USED FOR SPECIFIC PURPOSES.

Alumnus Book Fund.....	\$21.47
Class of 1874 Library Fund.....	15.08
Class of 1887 Library Fund.....	1.07
Class of 1897 Library Fund.....	35.19
Class of 1900 Library Fund.....	61.86
Class of 1902 Library Fund.....	33.73
W. R. Davis Scholarship Fund.....	85.80
James M. Goewey Scholarship Fund.....	3,200.24
Hamerslag Loan Fund.....	723.00
Charles M. Hitchcock Endowment Fund.....	1,033.15
Cornelius B. Houghton Scholarship Fund.....	394.75
Samuel C. Irving Prize Fund.....	25.00
Albert Sydney Johnston Memorial Scholarship Fund.....	45.23
Jucksch Endowment Fund.....	46.48
Martin Kellogg Fellowship Fund.....	600.00
Le Conte Memorial Fellowship Fund.....	665.32
John W. Mackay Jr. Endowment Fund.....	5,701.20
Eugene Meyer Jr. Library Fund.....	92.41
D. O. Mills Endowment Fund.....	2,381.87
Professor F. V. Paget Scholarship Fund.....	316.34
Frank M. Pixley Scholarship Fund.....	123.11
Michael Reese Library Fund.....	161.69
Richardson Latin Translation Prize Fund.....	16.80
	<hr/>
Carried forward .....	\$15,780.79



<i>Brought forward</i> .....	\$15,780.79
Sheffield Sanborn Scholarship Fund.....	547.52
Jane K. Sather Law Library Fund.....	753.79
Jane K. Sather Historical Library Fund.....	369.07
Jane K. Sather Library Fund.....	872.04
Summer Session Endowment Fund.....	207.38
Willard D. Thompson Memorial Fund.....	3,467.20
University Medal Fund.....	333.29
Veltin Endowment Fund.....	67.78
Barbara Weinstock Lectureship Fund.....	1,687.93
Whiting Fund .....	3,002.26
J. Clute Wilmerding Endowment Fund.....	7,432.55
	<hr/>
	\$34,521.60

## J. BALANCES ON HAND IN DONATION ACCOUNTS.

Agassiz donation .....	\$97.30
Belladonna Research, donation for.....	75.00
Boalt Hall of Law, donations for building (the total donations to be received will amount to \$150,000, which will be applied toward the cost of erection of building).....	106,175.80
Class of 1910, donation for bridge over Strawberry Creek.....	112.08
Tracy Crane, Scholarship for.....	62.50
Ethel W. Crocker, donation for Mexican Archaeological Research.....	1,037.66
Ethel W. Crocker, donation for Physiological Library Books.....	54.24
William H. Crocker, donation to Lick Observatory for apparatus.....	292.86
Dental Department Library Fund.....	17.70
Margaret B. Fowler, donation for Zoology.....	254.02
J. F. Fugazi, donation for Architectural books.....	100.00
Gown Fund (for purchase of President's academic gown).....	84.77
Greek Theatre, donations for marble chairs.....	1,092.66
Mrs. Hearst, donation to Lick Observatory for swimming pool.....	450.00
Dr. M. Herzstein, donation for Physiological Laboratory.....	775.76
Bust of Professor Hilgard, donations for.....	309.85
History I, donation for books.....	81.93
E. C. Hutchinson, donation for books.....	60.00
Irish books, donation for.....	57.17
Mary Lake Memorial, donation for books.....	554.65
Lick Observatory, donation for publication of Dr. E. E. Barnard's photographs .....	16.00
Lima Bean Investigations, donation for.....	100.00
	<hr/>
<i>Carried forward</i> .....	\$111,861.95



## BALANCE SHEET—SCHEDULES

507

<i>Brought forward</i> .....	\$111,861.95
D. O. Mills, donation to Lick Observatory for Southern Hemisphere Expedition .....	2,331.22
James K. Moffitt, donation for books.....	79.49
Native Sons of Golden West Fellowship.....	2,850.00
Nitrogen Fertilizers, donation for investigation of.....	102.95
Richardson Donation to Library .....	50.00
Sather Gateway donation, balance on hand.....	7,714.06
San Jose High School Scholarship .....	125.00
Spinello Library donation .....	46.91
F. M. Smith Fellowship .....	1,500.00
Claus Spreckels, donation for books.....	349.81
Student Infirmary, donations for.....	293.07
Caroline Thorsen donation to Library for Anatomy books.....	12.59
Palaeontology, donation for, by "A friend".....	220.66
Stadium, donations for.....	100.00
Tennis Court, donations for.....	295.50
University Hospital, donation for X-ray apparatus.....	500.00
	<hr/>
	\$128,433.21
	<hr/>

## K. BALANCES ON HAND TO BE USED FOR SPECIFIC PURPOSES.

Library sales of supplies.....	\$217.00
Library Exchange .....	72.29
Adams Fund Sales Account.....	114.54
California Educational Butter Scoring Contest.....	363.04
Fertilizer Control .....	11,763.59
Insecticide and Fungicide registrations.....	1,243.35
Hog Cholera Serum, sales of.....	2,554.58
Southern California Pathological Experiment Station sales.....	54.40
University Farm: Creamery sales .....	3,690.28
University Farm: Poultry sales .....	949.94
University Farm: Sales fund .....	9.25
University Farm: Shop sales .....	29.00
University Farm: Stock sales fund.....	1,788.28
University Farm: Students' deposits .....	831.82
University Farm: Veterinary sales .....	54.05
Viticultural sales .....	76.97
Sale of a brief account of Lick Observatory.....	516.46
Sale of Keeler Volume.....	189.00
Sale of Miss Shinn's Pamphlet.....	110.96
Sale of Tebtunis Papyri.....	351.72
Sale of "Zoe" .....	14.27
State Appropriation: Cereal Investigations .....	32.76
State Appropriation: Farmers' Institutes .....	2,021.53
State Appropriation: Plant Diseases, Northern.....	336.92
State Appropriation: Affiliated Colleges (improvement of grounds).....	326.95
	<hr/>
<i>Carried forward</i> .....	\$27,712.95

<i>Brought forward</i> .....	\$27,712.95
State Appropriation: Reimbursement of income (applicable to year 1910-1911) .....	
*Summer Session Fees:	
Summer Session .....	\$23,644.93
Home Economics .....	337.75
Manual Training .....	373.00
Montessori Method .....	40.00
Public Health .....	240.00
	<hr/>
	24,635.68
Musical and Dramatic Entertainments .....	1,824.30
Students' Infirmary, excess of receipts over expenditures to date.....	7,407.25
	<hr/>
	\$61,580.18

## L. SUNDRY CREDITORS.

Sundry Vouchers (bills approved for payment).....	\$65,889.51
Treasurer's Advances (bills already paid by Treasurer's advance checks) .....	77,860.26
Class of 1907 Permanent Endowment Fund Interest (payable to Secretary of class) .....	40.13
Class of 1909 Permanent Endowment Fund Interest (payable to Secretary of class) .....	22.88
Class of 1910 Permanent Endowment Fund Interest (payable to Secretary of class) .....	39.40
Class of 1911 Permanent Endowment Fund Interest (payable to Secretary of class) .....	37.86
Class of 1912 Permanent Endowment Fund Interest (payable to Secretary of class) .....	15.79
Mrs. Thérèse F. Colin European Fellowship Interest.....	17.26
Deposits on Plans.....	80.00
Deposits on Faculty Shower Keys.....	13.50
Certified checks accompanying bids, returnable to contractors.....	1,032.87
Sundry Creditors .....	193.88
Students' Deposits:	
Agriculture .....	\$67.40
Anatomy .....	60.00
Bacteriology .....	46.20
Botany .....	156.25
†Chemistry .....	2,708.16
Civil Engineering .....	49.00
Dairy .....	17.00
Diplomas .....	4,272.10
Histology .....	5.00
Key Rental .....	1.50
Library .....	781.00
Mechanics .....	208.70
Mechanics' Padlocks .....	64.45
Medicine .....	181.95
	<hr/>
<i>Carried forward</i> .....	\$8,618.71
	<hr/>
	\$145,243.34

\*In addition to these, certain fees will be retained from Chemistry and Physics.

† Some portion of these will be ultimately credited to Summer Session.

## BALANCE SHEET—SCHEDULES

509

<i>Brought forward</i> .....	\$8,618.71	\$145,243.34
Mineralogy .....	3.00	
Mining .....	155.34	
*Physics .....	995.55	
Physiology .....	32.80	
Psychology .....	84.50	
Zoology .....	135.65	
Zymology .....	20.50	
		10,046.05
Summer Session:		
Account 1908.....	\$1.07	
Account 1909.....	3.80	
Account 1910.....	7.44	
Account 1911.....	10.00	
Account 1912.....	385.38	
		407.69
		<u>\$155,697.08</u>

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\*Some portion of these will be ultimately credited to Summer Session.

UNIVERSITY OF CALIFORNIA—BALANCE SHEET, JUNE 30, 1912  
*Letters refer to Preceding Schedules*

ASSETS		LIABILITIES	
Real Estate and Improvements:		University of California (representing University property in general other than that held for investment purposes) .....	
A.—Real Estate in Berkeley .....	\$1,424,368.46		\$8,793,906.34
B.—Buildings and Improvements in Berkeley .....	3,164,709.01		
C.—Real Estate and Improvements not in Berkeley .....	2,951,319.68	G.—Endowment Fund Accounts .....	4,353,574.43
D.—Investments:		H.—Fund Interest Accounts: Balances on hand of the income of endowments .....	34,521.60
Bills Receivable .....	\$1,129,620.43	J.—Donation Accounts: Unexpended balances of donations .....	128,433.21
Savings Banks Deposits .....	49,872.54	K.—Balances on hand restricted to use for specific purposes .....	61,580.18
Bonds .....	1,064,271.00	L.—Sundry Creditors .....	155,697.08
Stocks .....	101,452.00	Permanent Building Fund .....	24,172.71
Real Estate and Improvements held as investments .....	1,201,896.39	Losses and gains in Endowment Pool Investments (increase in the valuation of properties in which Endowment Pool money's have been invested) .....	65,418.21
Balance of Contracts for sale of real estate .....	61,800.00		
	3,608,912.36		
See note at foot of page 505 as to relation between endowment and investments.			
E.—Departmental accounts and other expenditures carried forward as a charge against 1912-1913 .....			
	290,385.30		
F.—Amounts due from the State of California under various appropriations .....	122,867.95		
Sundry debtors .....	49,235.51		
Suspense Account, Turner mortgage .....	47,000.00		
Losses in Investments:			
Montgomery avenue bonds .....	\$21,999.00		
Highland Tract lots .....	296.71		
	22,295.71		
		Carried forward .....	\$13,617,303.76

## BALANCE SHEET

511

<i>Brought forward</i> .....	\$11,681,093.98	<i>Brought forward</i> .....	\$13,617,303.76
W. A. McKowen defalcation .....	44,120.10		
Equipment:			
General .....	\$1,231,270.97		
Bancroft Library .....	250,005.00		
	<u>1,481,275.97</u>		
Revenue: Overdraft to date .....	15,406.56		
Cash:			
I. W. Hellman, Jr., Treasurer ..	\$368,766.67		
Cash in hands of departments deposited with Treasurer after June 30, 1912 .....	2,277.98		
Contingent Funds .....	23,129.63		
Certified Checks (accompanying bids) .....	1,032.87		
Wells, Fargo & Co., deposit account .....	200.00		
	<u>395,407.15</u>		
			<u>\$13,617,303.76</u>



## STATISTICS OF THE INFIRMARY

COMPILED BY THE UNIVERSITY PHYSICIAN

## MEDICAL EXAMINATION OF INTRANTS, 1910-11

## Men examined, 930

Abdomen, abnormal .....	26	Teeth:	
Hernia .....	26	Good .....	201
Inguinal .....	17	Average .....	429
Umbilical .....	9	Poor .....	300
Chest, abnormal .....	84	Neglected .....	43
Flat .....	79	False .....	3
Funnel .....	3	Throat, abnormal .....	315
Flaring at border .....	2	Tonsils, hypertrophied:	
Feet, abnormal .....	483	Right .....	180
Flat .....	356	Left .....	135
Low .....	127	Thyroid, enlarged .....	7
General development:		Varicocele .....	115
Excellent .....	87	Slight .....	72
Good .....	671	Moderate .....	21
Fair .....	153	Marked .....	22
Poor .....	19	Unvaccinated .....	229
Genitalia, abnormal .....	99	History of:	
Circumcised .....	99	Chicken-pox .....	419
Heart, abnormal .....	20	Diphtheria .....	52
Irregular .....	15	Fractures .....	112
Intermittent .....	2	Malaria .....	117
Enlarged .....	3	Measles .....	840
Lungs, abnormal .....	7	Mumps .....	464
Nostrils, abnormal .....	306	Otitis media .....	19
Obstructed, right .....	113	Pneumonia .....	91
Obstructed, left .....	193	Smallpox .....	5
Nourishment:		Scarlet fever .....	160
Thin .....	119	Rheumatism .....	34
Average .....	777	Tuberculosis .....	7
Obese .....	34	Glands .....	2
Shoulders, round .....	125	Lungs .....	1
Skin, abnormal .....	305	Bones .....	4
Pale .....	28	Typhoid .....	80
Rough .....	5	Whooping-cough .....	482
Acne .....	272	History of operations for:	
Back .....	181	Adenoids .....	70
Face .....	60	Appendix .....	22
Chest .....	31	Circumcision .....	99
Spine, abnormal .....	234	Gall-stones .....	1
Lordosis .....	179	Hernia .....	7
Scoliosis .....	55	Tonsillectomy .....	23
Dorsal .....	47	Tonsillotomy .....	19
Lumbar .....	8	Turbinates .....	23

## MEDICAL EXAMINATION OF INTRANTS, 1910-11

## Women examined, 601

Abdomen, hernia .....	1	Unvaccinated .....	130
Chest, deformity .....	158	History of:	
Feet, abnormal .....	575	Chicken-pox .....	402
Longitudinal low .....	350	Diphtheria .....	48
Anterior low .....	225	Fractures .....	64
General development:		Malaria .....	89
Excellent .....	11	Measles .....	548
Good .....	450	Mumps .....	331
Fair .....	121	Otitis media .....	89
Poor .....	19	Pneumonia .....	77
Heart, abnormal .....	5	Scarlet fever .....	115
Lungs, abnormal .....	4	Rheumatism .....	79
Menstrual disorders .....	272	Tuberculosis .....	16
Nostrils—naso-pharynx, abnormal..	113	Typhoid .....	69
Nourishment:		Whooping-cough .....	458
Thin .....	162	History of operations for:	
Average .....	424	Appendicitis .....	18
Obese .....	15	Hernia .....	1
Shoulders, round .....	131	Miscellaneous .....	30
Skin, diseased .....	50	Nose .....	75
Spine, abnormal .....	180	Pelvic .....	5
Teeth, poor .....	168	Tonsillectomy .....	36
Throat, diseased .....	305	Tonsillotomy .....	27
Thyroid, enlarged .....	66		

## SPECIAL EXAMINATION OF EYES, 1910-11

	Men	Women	Total
Normal .....	240	132	372
Hyperopia .....	154	91	245
Simple Hyperoptic Astigmatism .....	360	210	570
Compound Hyperoptic Astigmatism .....	27	46	73
Myopia .....	36	20	56
Simple Myopic Antigmatism .....	55	34	89
Compound Myopic Astigmatism .....	35	30	65
	<hr/> 907	<hr/> 563	<hr/> 1,470

## SPECIAL EXAMINATION OF NOSE, THROAT, AND EARS, 1910-11

Ear:	Men	Women	Nose:	Men	Women
Normal .....	619	347	Normal .....	507	307
Diseases of the Conduc-			Spura .....	17	10
tive Apparatus:			Crista .....	30	6
Tubo Tympanic affection	18	3	Deviations .....	103	14
Acute Suppurative (Mid.			Ozena .....	2	6
ear) .....	1	1	Chronic Hypertrophies ..	34	31
Chronic Suppurative			Chronic Sinusitis .....	2	....
(Mid. ear) .....	12	2	Polypi .....	1	....
Chronic Serous Catarrh	1	....			
Chronic Adhesive Proc.	1	....	Naso Pharynx:		
Cerumen .....	60	40	Normal .....	527	223
Atropic Drum .....	....	1	Adenoids (large) .....	83	17
Diseases of the Perceiv-			Adenoids (small) .....	38	29
ing Apparatus:			Chronic Pharyngitis .....	6	....
"Sarsio Auris Int" .....	4	....	Path. Lingual Tons. ....	2	....
Otosclerosis .....	1	....	Papiloma of Uvula .....	1	....
	657	370		657	370
Throat:					
Tonsils absent .....	70	65			
Small (1) .....	415	188			
(2) .....	88	72			
Large (3) .....	47	24			
Pathological (4) .....	18	16			
(5) .....	19	5			
	657	370			

## INFIRMARY, 1910-11. BED PATIENTS

DISCHARGED:	Men	Women	Total
Well .....	331	102	433
Relieved .....	102	28	130
Not relieved .....	2	....	2
	435	130	565

Total number of Infirmary days .....	2,659
Number of days open .....	280
Total number of cases .....	565
Total number of individuals .....	437
Students who were in the Infirmary more than once during the year.....	35
Average stay in days .....	5
Average number of patients per day .....	9.5
Surgical cases .....	194
Operations .....	73
Anaesthesia (general) .....	51

## INFIRMARY, 1910-11

Diseases	Men	Women	Diseases	Men	Women
Anaemia, secondary .....	1	....	Injuries .....	19	5
Ano Fissure .....	2	....	Jaundice .....	1	....
Ano Fistula .....	1	....	Malaria .....	11	2
Appendicitis .....	13	5	Measles .....	5	4
Asthma .....	4	....	Measles, German .....	18	7
Bronchitis .....	45	17	Mental .....	1	1
Chicken-pox .....	4	....	Mumps .....	6	....
Circumcision .....	2	....	Myalgia .....	1	....
Cystitis .....	2	....	Neuralgia .....	1	....
Digestion .....	28	8	Neurasthenia .....	1	....
Diphtheria .....	....	1	Nose and Throat, of the:		
Ear, of the:			Laryngitis .....	2	....
Eustachian closure .....	2	....	Left frontal sinus .....	2	....
Otitis media .....	17	2	Pharyngitis .....	43	28
Mastoiditis .....	1	....	Rhinitis .....	7	3
Ruptured drum .....	1	....	Right antrum .....	5	....
Wax .....	....	1	Tracheitis .....	28	1
Epilepsy .....	....	1	Orchitis .....	1	....
Eye, of the:			Pleurisy .....	1	2
Conjunctivitis .....	17	2	Pneumonia .....	5	....
Foreign body .....	2	....	Poison Oak .....	7	2
Iritis .....	1	....	Scarlet Fever .....	1	....
Sty .....	1	....	Sciatica .....	....	1
Fecal Fistula .....	1	....	Skin, of the:		
Fractures:			Sycosis .....	2	....
Clavicle .....	1	....	Urticaria .....	1	....
Coccyx .....	....	1	Sprains .....	7	4
Elbow .....	....	1	Syphilis .....	5	....
Nose .....	1	1	Tapeworm .....	1	....
Rib .....	3	....	Teeth extraction .....	....	1
Heart .....	2	1	Tonsils .....	56	13
Hemorrhage:			Tuberculosis, of the:		
Tonsil wound .....	1	....	Bladder .....	1	....
Hernia, Inguinal .....	2	....	Pulmonary .....	1	1
Hookworm .....	2	....	Undescended Testicle .....	1	....
Infantile Paralysis .....	....	1	Urethritis, Gonorrheal .....	4	....
Infections .....	26	4	Vaccinia .....	6	....
Ingrowing toe-nail .....	1	....	Women, of .....	....	9
				435	130

## SURGICAL CASES, 1910-11

Diseases	Men	Women	Diseases	Men	Women
<b>Abscess:</b>			<b>Infections:</b>		
Alveolar .....	1	....	Chin .....	1	....
Cheek .....	2	....	Face .....	1	....
Knee .....	1	....	Foot .....	1	....
Leg .....	1	....	Hand .....	1	....
Maxillary bone .....	....	1	Heel .....	1	....
Neck .....	4	....	Leg .....	3	....
Sacrum .....	....	1	Neck .....	1	....
Tonsil .....	1	1	Nose .....	1	....
Adenoidectomy .....	11	8	Toe .....	5	....
Amputation, Fingers .....	1	....	<b>Injuries:</b>		
Ano Fissure .....	2	....	Burns, Face .....	1	....
Ano Fistula .....	1	....	Concussion, Brain .....	6	....
Appendectomy .....	3	1	<b>Contusions:</b>		
Circumcision .....	2	....	Arm .....	1	....
Ear, of the:			Elbow .....	1	....
Eustachian closure ....	2	....	Head .....	2	....
Mastoiditis .....	1	....	Nose .....	1	....
Otitis media .....	17	2	Shoulder .....	1	....
Ruptured drum .....	1	....	<b>Lacerations:</b>		
Wax .....	....	1	Cheek .....	1	....
Endometritis .....	....	1	Finger .....	1	....
Eye, of the:			Foot .....	1	....
Conjunctivitis .....	17	2	Leg .....	1	....
Foreign body .....	2	....	Scalp .....	1	1
Iritis .....	1	....	Strained back .....	1	....
Sty .....	1	....	Synovitis, knee .....	....	2
Fecal Fistula .....	1	....	Torn ligaments .....	....	1
<b>Fractures:</b>			<b>Sprains:</b>		
Clavicle .....	1	....	Ankle .....	2	1
Coccyx .....	....	1	Hip .....	....	1
Elbow .....	....	1	Knee .....	3	2
Nose .....	1	1	Sterno Clavicular Joint..	1	....
Rib .....	3	....	Wrist .....	1	....
Hernia .....	1	....	Teeth, extraction .....	....	1
Hysterectomy .....	....	1	Tonsillectomy .....	23	12
Ingrowing toe-nail .....	1	....	Undescended Testicle .....	1	....
			Vaccinia .....	6	....
				151	43

## INFIRMARY HISTORY OF THE CLASS OF 1911

Graduating .....	222	160
Received Infirmary service during four years' residence ....	195	134
Percentage receiving service during four years' residence ....	87.8%	83.7%
Received Infirmary service during first year .....	178	87
Received Infirmary service during second year .....	142	75
Received Infirmary service during third year .....	142	93
Received Infirmary service during fourth year .....	135	96



## DISPENSARY, 1910-11. MEN

## CLASSES

Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Anal, Fissure .....	3	2	....	1	....	6
Appendicitis .....	2	4	1	1	....	8
Asthma .....	8	2	4	....	....	14
Bronchitis .....	31	21	16	6	5	79
Burns:						
Abdomen .....	....	....	1	....	....	1
Chest .....	....	3	....	....	....	3
Eyes .....	....	1	....	....	....	1
Face .....	2	....	....	....	....	2
Finger .....	....	1	1	....	....	2
Foot .....	1	....	1	1	1	4
Hand .....	2	2	....	....	1	5
Leg .....	....	....	....	....	1	1
Bursitis .....	....	....	1	....	....	1
Chicken-pox .....	4	....	....	....	....	4
Cyst .....	3	4	2	1	1	11
Cystitis .....	1	2	....	1	1	5
Digestion, of the:						
Constipation .....	28	21	12	7	2	70
Diarrhoea .....	15	7	1	....	3	26
Food poisoning .....	24	17	5	1	1	48
Gastric .....	18	17	3	2	3	43
Intestinal indig. ....	36	40	23	6	2	107
Dislocations:						
Elbow .....	....	1	....	....	....	1
Finger .....	2	....	2	1	....	5
Thumb .....	1	....	....	....	....	1
Ear:						
Deafness .....	....	....	....	1	....	1
Eustachian Closure ....	7	14	6	2	....	29
Foreign body .....	....	....	....	1	....	1
Otitis Media .....	13	7	6	5	1	32
Ruptured drum .....	....	1	....	....	....	1
Wax .....	17	20	12	5	4	58
Miscellaneous .....	2	4	4	1	2	13
Epilepsy .....	1	....	....	....	....	1
Eye:						
Asthenopia .....	4	....	....	....	....	4
Astigmatism .....	....	1	1	1	....	3
Conjunctivitis .....	36	35	13	11	5	100
Cyst .....	1	....	2	....	....	3
Iritis .....	....	....	1	....	....	1
Foreign body .....	2	5	5	1	1	14
Muscular weakness ....	11	12	10	5	1	39
Refraction .....	7	13	9	7	4	40
Strain .....	7	8	7	....	1	23
Sty .....	10	3	5	1	1	20
Ulcer .....	....	....	1	....	....	1
Miscellaneous .....	4	4	1	2	2	13

## DISPENSARY, 1910-11. MEN—(Continued)

CLASSES						
Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Fistula, Fecal .....	---	---	1	---	---	1
Flatfoot .....	14	5	2	1	4	26
Fractures:						
Ankle .....	1	---	---	---	---	1
Clavicle .....	1	---	---	---	---	1
Coccyx .....	1	---	---	---	---	1
Finger .....	1	1	---	---	---	2
Hand .....	---	1	---	---	---	1
Nose .....	1	---	---	---	---	1
Rib .....	4	---	---	---	---	4
Wrist .....	---	---	1	---	---	1
Headache .....	20	11	8	5	3	47
Heart .....	4	5	3	1	1	14
Hemorrhoid .....	2	4	---	---	---	6
Hernia .....	3	2	1	1	---	7
Infections:						
Abscess:						
Alveolar .....	12	8	2	5	---	27
Chest .....	1	---	---	---	---	1
Ear .....	2	---	1	2	---	5
Neck .....	4	1	---	---	---	5
Back .....	1	1	2	---	---	4
Boils:						
Arm .....	7	4	1	1	---	13
Ankle .....	1	---	3	2	---	6
Axilla .....	---	---	1	---	---	1
Back .....	---	2	---	---	---	2
Buttock .....	4	3	1	1	1	10
Ear .....	4	2	1	---	---	7
Face .....	16	21	13	6	1	57
Finger .....	6	15	8	2	---	31
Heel .....	3	2	---	---	---	5
Leg .....	3	1	2	---	1	7
Lip .....	2	2	1	---	1	6
Neck .....	20	15	15	4	1	55
Tonsil .....	1	1	---	---	---	2
Miscellaneous .....	2	---	---	---	---	2
Corn .....	8	13	7	2	---	30
Eyelid .....	2	---	---	---	---	2
Face .....	3	1	2	2	---	8
Finger .....	12	10	2	2	---	26
Foot .....	2	2	2	3	---	9
Hand .....	11	11	2	2	---	26
Head .....	---	5	2	2	---	9
Knee .....	---	---	1	---	---	1
Neck .....	8	3	1	3	---	15
Wart .....	32	30	20	17	2	101
Wrist .....	---	2	1	---	---	3

## DISPENSARY, 1910-11. MEN—(Continued)

## CLASSES

Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Injuries:						
Ankle .....	5	3	4	5	2	19
Arm .....	11	8	4	1	....	24
Back .....	12	3	6	3	....	24
Chest .....	....	1	....	....	....	1
Elbow .....	8	8	....	....	4	20
Eye .....	5	4	4	2	....	15
Face .....	12	10	5	2	....	29
Finger .....	12	16	13	3	4	48
Foot .....	21	16	11	4	2	54
Groin .....	1	....	1	....	....	2
Hand .....	6	12	5	5	1	29
Knee .....	15	9	4	2	1	31
Leg .....	11	13	1	2	....	27
Shoulder .....	8	2	....	....	....	10
Sternum .....	1	1	1	....	....	3
Injuries:						
Abdomen .....	1	3	....	....	....	4
Ear .....	1	....	....	1	....	2
Genitalia .....	5	1	3	....	....	9
Groin .....	2	3	....	....	1	6
Head .....	5	3	....	1	....	9
Hip .....	1	....	3	1	....	5
Rib .....	1	2	2	2	....	7
Toe .....	7	7	2	....	....	16
Wrist .....	3	2	1	....	....	6
Jaundice .....	1	3	1	....	....	5
Malaria .....	6	4	3	1	1	15
Measles .....	2	....	....	....	....	2
Measles, German .....	4	3	1	1	....	9
Miscellaneous .....	71	58	28	14	8	179
Mumps .....	....	2	1	1	....	4
Myalgia .....	14	5	7	2	1	29
Neuralgia .....	10	10	5	8	1	34
Neuresthenia .....	3	1	3	....	5	12
Nose and Throat, of the:						
Adenoids .....	1	1	1	....	....	3
Antrum .....	....	3	1	1	....	5
Epitaxis .....	....	....	1	....	....	1
Frontal Sinus .....	3	3	....	1	1	8
Laryngitis .....	25	28	13	10	5	81
Pharyngitis .....	107	82	63	35	21	308
Rhinitis .....	157	120	73	46	19	415
Septum .....	2	2	1	2	1	8
Turbinates .....	....	1	2	....	....	3
Uvula .....	....	1	....	1	1	3
Vincent's Angina .....	2	....	....	....	....	2
Pleurisy .....	1	....	....	1	....	2
Pneumonia .....	....	....	1	....	....	1
Poison Oak .....	15	28	15	9	5	72

## DISPENSARY, 1910-11. MEN—(Continued)

CLASSES						
Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Skin:						
Acne .....	14	7	2	2	2	27
Bunion .....	4	4	1	....	....	9
Chilblains .....	3	....	2	....	....	5
Eczema .....	14	14	9	9	3	49
Erysipelas .....	1	....	1	....	....	2
Herpes, Simplex .....	8	3	1	1	1	14
Impetigo .....	16	6	7	2	3	34
Pediculi .....	3	4	2	3	....	12
Ringworm .....	17	11	11	2	....	41
Scabies .....	7	4	7	....	2	20
Sycosis .....	....	2	1	2	....	5
Tinea Circinata .....	....	2	2	....	....	4
Tinea Versicolor .....	1	....	....	....	....	1
Urticaria .....	7	3	1	3	1	15
Miscellaneous .....	3	2	1	2	1	9
Sprains:						
Acromic-clavicular .....	1	....	....	....	....	1
Ankle .....	17	16	11	10	....	54
Arm .....	1	....	....	1	....	2
Back .....	5	6	6	1	1	19
Chest .....	1	....	....	....	....	1
Elbow .....	1	....	1	....	....	2
Finger .....	1	6	....	....	....	7
Foot .....	5	2	....	....	....	7
Hand .....	....	1	....	....	....	1
Heel .....	1	1	....	1	1	4
Knee .....	6	3	3	2	1	15
Side .....	2	....	....	....	....	2
Shoulder .....	3	8	2	1	1	15
Thumb .....	3	3	3	1	....	10
Toe .....	....	1	....	....	....	1
Wrist .....	6	4	2	1	....	13
Synovitis, Shoulder .....	....	....	1	....	....	1
Teeth, miscellaneous .....	5	4	2	1	8	20
Tonsillitis .....	51	41	22	9	4	127
Tracheitis .....	59	54	37	19	11	180
Tuberculosis:						
Bladder .....	2	5	2	....	....	9
Femur .....	....	....	....	....	1	1
Lungs .....	....	....	1	....	2	3
Urethritis .....	4	1	....	....	....	5
Vaccinations .....	187	25	13	8	7	240
Dressings .....	2	1	....	....	....	3
Varicocele .....	2	1	....	2	....	5
Venereal:						
Spec. Ureth. ....	5	11	2	3	6	27
Syphilis .....	2	1	....	....	....	3
Wen .....	1	....	....	1	....	2
Whooping-cough .....	1	....	....	....	....	1
Total .....	1572	1194	710	389	198	4063

## DISPENSARY, 1910-11. WOMEN

## CLASSES

Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Anemia .....	....	....	....	....	2	2
Appendicitis .....	1	....	2	....	....	3
Asthma .....	....	1	....	....	....	1
Bronchitis .....	5	5	2	2	4	18
Burns:						
Arm .....	....	1	....	....	....	1
Chest .....	....	....	....	1	....	1
Finger .....	2	2	1	....	....	5
Hand .....	4	6	1	....	....	11
Miscellaneous .....	....	1	....	....	....	1
Chicken-pox .....	....	....	....	1	....	1
Cyst .....	....	3	....	....	....	3
Digestion, of the:						
Constipation .....	29	12	6	11	6	64
Diarrhoea .....	4	4	2	....	1	11
Food poisoning .....	11	5	5	2	5	28
Gastric .....	24	17	15	21	4	81
Intestinal indig. ....	19	13	14	6	6	58
Dislocations:						
Finger .....	2	....	....	....	....	2
Jaw .....	1	....	....	....	....	1
Thumb .....	....	....	....	1	....	1
Ear, of the:						
Deafness .....	....	1	1	....	....	2
Eustachian closure ....	....	....	2	....	1	3
Foreign body .....	....	....	1	....	....	1
Otitis Media .....	1	1	1	....	....	3
Wax .....	24	7	5	11	4	51
Miscellaneous .....	5	1	3	....	2	11
Eye, of the:						
Conjunctivitis .....	20	11	7	8	4	50
Foreign body .....	1	3	....	....	....	4
Muscular weakness ....	1	....	....	....	....	1
Refraction .....	1	3	2	2	1	9
Strain .....	4	9	2	1	2	18
Sty .....	4	4	1	....	1	10
Miscellaneous .....	3	1	....	....	....	4
Epilepsy .....	....	....	1	....	....	1
Flatfoot .....	8	1	1	1	1	12
Fracture, Coccyx .....	1	....	....	2	....	3
Gland, Tuberculosis of....	....	1	....	....	....	1
Headache .....	13	18	8	7	5	51
Heart .....	1	1	2	....	1	5
Hemorrhoid .....	2	1	1	2	1	7
Hernia .....	....	....	....	1	....	1



## DISPENSARY, 1910-11. WOMEN—(Continued)

## CLASSES

Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Infections:						
Abscess:						
Alveolar .....	2	3	2	....	1	8
Coccyx .....	....	....	....	....	1	1
Ear .....	....	....	1	....	....	1
Tonsil .....	1	....	....	....	....	1
Boils:						
Axilla .....	1	1	....	....	....	2
Ankle .....	....	....	....	....	1	1
Arm .....	....	2	....	....	....	2
Buttock .....	....	....	1	....	....	1
Ear .....	1	....	....	....	....	1
Face .....	11	6	2	3	1	23
Finger .....	1	4	1	1	1	8
Neck .....	....	....	2	....	....	2
Scapula .....	1	....	....	....	....	1
Arm .....	1	1	....	1	....	3
Axilla .....	1	....	....	....	....	1
Corn .....	6	8	1	7	4	26
Face .....	1	....	1	....	....	2
Finger .....	10	5	2	3	1	21
Foot .....	....	2	3	4	....	9
Hand .....	1	....	2	3	1	7
Leg .....	2	....	1	....	....	3
Thumb .....	2	....	4	1	....	7
Umbilicus .....	....	1	....	....	....	1
Wart .....	5	6	8	5	....	24
Injuries:						
Arm .....	2	5	2	....	....	9
Back .....	....	1	2	....	....	3
Chest .....	....	....	1	....	....	1
Elbow .....	3	....	1	....	....	4
Eye .....	5	1	....	2	1	9
Face .....	2	3	4	1	1	11
Finger .....	7	7	11	4	2	31
Foot .....	4	2	5	5	....	16
Hand .....	3	3	1	2	2	11
Heel .....	3	2	1	....	....	6
Hip .....	....	1	....	....	....	1
Knee .....	6	2	1	2	1	12
Leg .....	3	1	1	1	....	6
Neck .....	....	1	....	....	....	1
Thumb .....	1	4	....	2	....	7
Toe .....	1	1	2	....	....	4
Wrist .....	1	1	1	....	1	4
Lumbago .....	1	2	1	....	....	4
Low Arches .....	12	6	3	5	9	35

## DISPENSARY, 1910-11. WOMEN—(Continued)

## CLASSES

Diseases	1st year	2d year	3d year	4th year	Grad.	Total
Malaria .....	1	....	....	....	....	1
Measles .....	1	....	....	....	....	1
Measles, German .....	3	2	2	....	....	7
Myalgia .....	5	10	3	2	....	20
Miscellaneous .....	49	20	18	12	20	119
Neuralgia .....	6	9	2	4	2	23
Nose and Throat, of the:						
Adenoids .....	2	....	1	....	....	3
Catarrh .....	2	....	1	....	....	3
Epitaxis .....	1	....	....	....	....	1
Laryngitis .....	6	1	7	6	2	22
Pharyngitis .....	94	67	67	52	32	312
Rhinitis .....	76	49	48	35	16	224
Septum .....	....	1	1	....	....	2
Pleurisy .....	2	....	1	....	....	3
Poison Oak .....	11	4	16	13	8	52
Rheumatism .....	....	....	....	....	1	1
Skin:						
Acne .....	8	4	4	1	....	17
Bunion .....	4	1	1	2	....	8
Chilblains .....	5	5	2	....	2	14
Eczema .....	14	9	4	6	3	36
Herpes, Simplex .....	1	5	1	....	....	7
Herpes, Zoster .....	2	....	1	....	....	3
Impetigo .....	5	5	1	....	2	13
Pediculi .....	1	....	....	....	....	1
Ringworm .....	3	2	2	2	....	9
Scabies .....	2	5	2	....	....	9
Urticaria .....	1	....	....	....	....	1
Wen .....	....	1	....	....	....	1
Miscellaneous .....	4	2	....	1	....	7
Sprains:						
Ankle .....	7	8	6	6	2	29
Back .....	1	....	....	....	....	1
Elbow .....	....	....	1	....	....	1
Thumb .....	....	1	1	....	....	2
Wrist .....	3	2	1	....	....	6
Teeth, Miscellaneous .....	2	4	2	1	1	10
Thyroid .....	9	1	....	....	....	10
Tonsillitis .....	24	15	12	8	4	63
Tracheitis .....	5	4	2	2	1	14
Vaccinations .....	105	21	6	3	9	144
Dressings .....	4	....	....	2	....	6
Women, of .....	38	31	17	20	22	128
Total .....	799	504	387	310	206	2206

## DISPENSARY SUMMARIES, 1910-11

	Men	Women	Total
Individuals treated .....	1,722	1,018	2,740
Number of treatments .....	16,868	7,489	24,357
Number of cases .....	4,063	2,206	6,269
Number of days open .....			280
Average number of patients treated daily .....			87
Average number of treatments per patient .....			8.9
Visits at students' homes .....			15
Percentage of students treated .....			83.9
Percentage of graduating class, 1911, treated at the Infirmary since its opening, January, 1907 .....			85.9

## MEDICAL EXAMINATION OF INTRANTS, 1911-12

## MEN

Abdomen, abnormal .....	19	Nasopharynx, abnormal .....	126
Hernia .....	19	Adenoids .....	119
Inguinal .....	18	Large .....	42
Umbilical .....	1	Small .....	77
Chest, abnormal .....	311	Chronic Pharyngitis .....	7
Flat .....	286	Nourishment:	
Funnel .....	19	Thin .....	144
Pigeon .....	6	Average .....	777
Ear, abnormal .....	79	Obese .....	43
Cerumen .....	60	Shoulders, round .....	383
Tubo Tympanic Catarrh .....	9	Skin, abnormal .....	289
Chronic Suppuration .....	7	Spine, abnormal .....	209
Lesion of Internal Ear .....	1	Lordosis .....	139
Chronic Adhesive Process .....	1	Scoliosis .....	70
Myringitis, Acute .....	1	Teeth:	
Eye, refractive error .....	595	Good .....	545
Feet, abnormal .....	716	Fair .....	359
Longitudinal Arches,		Poor .....	49
abnormal .....	596	Neglected .....	21
Low .....	556	Throat, abnormal .....	635
Flat .....	40	Tonsils:	
Anterior Arches, abnormal 120		Absent .....	21
Low .....	118	Buried .....	60
Flat .....	2	Projecting .....	453
General Development:		Pathological .....	101
Excellent .....	152	Thyroid, enlarged .....	26
Good .....	684	Unvaccinated .....	238
Fair .....	2	Varicocele .....	319
Poor .....	136	Slight .....	58
Genitalia, abnormal .....	117	Moderate .....	260
Heart, abnormal .....	15	Marked .....	1
Irregular .....	9	History of diseases previous to	
Intermittent .....	1	entering college:	
Enlarged .....	5	Asthma .....	1
Lungs, abnormal .....	9	Acne .....	289
Lymph Nodes, enlarged .....	57	Appendicitis .....	5
Nose, abnormal .....	168	Arthritis .....	1
Spurs .....	23	Bronchitis .....	6
Crista .....	11	Chickenpox .....	450
Deviations Septum .....	89	Constipation .....	32
Chronic Hypertrophies .....	29	Carbuncle .....	1
Chronic Sinusitis .....	2	Chancroid .....	2
Ozena .....	5	Catarrh .....	2
Eczema Septum .....	2	Diphtheria .....	67
Dilatation of Septum vessels .....	2	Erysipelas .....	1
Perforation of Septum .....	2	Endocarditis .....	1
Ulcer of Septum .....	1	Eczema .....	1
Cyst of Superior Pharyn-		Gonorrhoea .....	35
geal Wall .....	1	Goitre .....	1
Fibroid Polyp in left pos-		Gastritis .....	1
terior choana .....	1		

## MEDICAL EXAMINATION OF INTRANTS, 1911-12—(Continued)

## MEN

Haemorrhoids .....	1	Tonsilectomy .....	66
Hay Fever .....	1	Tonsilotomy .....	5
Infections .....	6	Miscellaneous operations:	
Influenza .....	49	Arm .....	3
Jaundice .....	2	Ear .....	6
Laryngitis .....	1	Eye .....	8
Measles .....	781	Foot .....	1
Mumps .....	485	Finger .....	1
Malaria .....	108	Glands .....	2
Meningitis .....	2	Hand .....	2
Neurasthenia .....	1	Head .....	2
Otitis Media .....	16	Knee .....	3
Orchitis .....	2	Leg .....	3
Pleurisy .....	23	Neck .....	1
Pneumonia .....	65	Nose .....	32
Psoriasis .....	1	Throat .....	13
Ptomaine Poisoning .....	1	Toe .....	2
Rheumatism .....	51	Testes .....	1
Scarlet Fever .....	143	History of dislocations previous to	
Smallpox .....	36	entering college:	
Syphilis .....	1	Arm .....	2
Stomatitis .....	1	Elbow .....	2
Typhoid Fever .....	92	Hip .....	1
Tonsillitis .....	192	Knee Cap .....	1
Whooping Cough .....	17	Wrist .....	1
History of operations previous to		History of fractures previous to	
entering college:		entering college:	
Adenoidectomy .....	48	Arm .....	50
Abscess of:		Ankle .....	4
Shoulder .....	1	Arches—Feet .....	1
Jaw .....	1	Chin .....	1
Ear .....	1	Collarbone .....	28
Miscellaneous .....	2	Elbow .....	2
Appendectomy .....	21	Foot .....	4
Blood Tumor—leg .....	1	Finger .....	12
Circumcision .....	117	Hip .....	2
Empyema .....	1	Hand .....	4
Fistula .....	1	Jaw .....	3
Finger amputated .....	1	Knee .....	2
Hernia .....	10	Leg .....	15
Hydrocele .....	2	Nose .....	33
Hip Disease .....	1	Rib .....	12
Haemorrhoids .....	1	Shoulder .....	3
Leg amputated .....	1	Skull .....	6
Mastoid .....	4	Toe .....	3
Paronychia .....	1	Tibia .....	1
Pleurisy .....	1	Thigh .....	2
Skin grafted .....	1	Thumb .....	1
Septum straightened .....	1	Wrist .....	21
Varicocele .....	1	Students examined .....	974



## MEDICAL EXAMINATION OF INTRANTS, 1911-12

## WOMEN

Abdomen, abnormal .....	1	Spine, abnormal .....	94
Hernia, Umbilical .....	1	Lordosis .....	3
Chest, abnormal .....	180	Scoliosis .....	91
Flat .....	121	Teeth:	
Funnel .....	25	Good .....	141
Pigeon .....	33	Average .....	349
Flaring at base .....	1	Poor .....	222
Ear, abnormal .....	63	Neglected .....	17
Cerumen .....	47	False .....	2
Tubo Tympanic Catarrh..	10	Throat, abnormal .....	409
Chronic Suppuration .....	5	Tonsils:	
Eczema of External Ear..	1	Absent .....	14
Eyes, refractive error .....	457	Buried .....	52
Feet, abnormal .....	469	Projecting .....	304
Longitudinal Arches,		Pathological .....	39
abnormal .....	293	Thyreoid, enlarged .....	93
Flat .....	26	Unvaccinated .....	204
Low .....	267		
Anterior Arches, abnormal	176	History of diseases previous to	
Flat .....	3	entering college:	
Low .....	173	Anaemia .....	1
General Development:		Arthritis .....	2
Normal .....	398	Appendicitis .....	4
Excellent .....	16	Acne .....	376
Good .....	192	Asthma .....	4
Fair .....	121	Bronchitis .....	30
Poor .....	14	Chorea .....	5
Lungs, abnormal .....	32	Constipation .....	108
Lymph Nodes, enlarged .....	112	Cholera Morbis .....	1
Menstrual Disorders .....	154	Chickenpox .....	464
Nasopharynx, abnormal .....	64	Croup .....	1
Adenoids .....	59	Diphtheria .....	82
Large .....	23	Dyspepsia .....	1
Small .....	36	Dysentery .....	2
Chronic Pharyngitis .....	5	Displaced Uterus .....	1
Nose, abnormal .....	61	Epilepsy .....	1
Spurs .....	10	Erysipelas .....	1
Crista .....	6	Floating Cartilage—Knee .....	1
Chronic Hypertrophies .....	7	Gastritis .....	1
Chronic Sinusitis .....	6	Goitre .....	1
Deviations Septum .....	29	Hay Fever .....	1
Dilatation of Septum vessels	1	Hernia, Umbilical .....	1
Perforation of Septum .....	1	Herpes Zoster .....	1
Synechia of Nose .....	1	Influenza .....	10
Nourishment:		Infected Finger .....	2
Thin .....	197	Infected Gall Bladder .....	1
Average .....	458	Indigestion .....	4
Obese .....	62	Jaundice .....	16
Normal .....	14	Measles .....	669
Shoulders, round .....	232	Meningitis .....	3
Skin, abnormal .....	376	Malaria .....	92

## MEDICAL EXAMINATION OF INTRANTS, 1911-12—(Continued)

## WOMEN

Mumps .....	321	Floating Kidney .....	2
Neuralgia .....	4	Gall Bladder .....	2
Neurasthenia .....	15	Glands of Neck .....	11
Otitis Media .....	66	Hysterectomy .....	4
Pneumonia .....	70	Ingrowing Toenail .....	1
Pleurisy .....	37	Internal Abscess .....	1
Ptomaine Poisoning .....	1	Ligament shortened .....	3
Partial Paralysis—Side .....	1	Mastoid .....	3
Peritonitis .....	2	Paronychia .....	1
Rheumatism .....	78	Miscellaneous operations:	
Smallpox .....	12	Eye .....	11
Scarlet Fever .....	161	Foot .....	1
Spinal Curvature .....	3	Knee .....	2
Seborrhoic Eczema .....	1	Neck .....	1
Stomatitis .....	1	Nose .....	15
Tonsilitis .....	246	Rectum .....	1
Trichophytosis .....	1	Scalp (stitches) .....	3
Typhoid Fever .....	75	Throat .....	1
Ulcers of the Stomach .....	1	Miscellaneous .....	1
Varioloid .....	5	Nasal Spur .....	1
Vincent's Angina .....	1	Oöphorectomy .....	4
Whooping Cough .....	390	Oöphorotomy .....	1
History of operations previous to entering college:		Polyps:	
Abscess of:		Nose .....	3
Ear .....	2	Uterine .....	2
Finger .....	2	Tonsilectomy .....	85
Tooth .....	2	Tonsilotomy .....	6
Spine .....	1	History of fractures previous to entering college:	
Neck .....	2	Arm .....	19
Wrist .....	2	Ankle .....	3
Adhesions removed .....	2	Collarbone .....	13
Anal Fissure .....	1	Elbow .....	4
Amputations:		Finger .....	4
Toe .....	5	Foot .....	2
Finger .....	1	Hand .....	1
Joint of toe .....	2	Hip .....	1
Aspirated for Empyema .....	2	Knee .....	3
Adenoidectomy .....	82	Leg .....	3
Appendectomy .....	35	Ribs .....	6
Cyst of Ovary .....	2	Thigh .....	2
Curettement .....	6	Thumb .....	2
Clavus removed .....	1	Wrist .....	3
Cholecystotomy .....	1	History of dislocations previous to entering college:	
Cervical Glands .....	1	Collarbone .....	1
Caruncle .....	1	Elbow .....	5
Cervix amputated .....	1	Fingers .....	2
Dilatation of Cervix .....	6	Hip .....	1
Enlarged Glands, Breast .....	1	Shoulders .....	4
Empyema .....	1	Wrist .....	2
Fibroid of:		Students examined .....	731
Breast .....	1		
Uterus .....	1		

## INFIRMARY, 1911-12. HOUSE PATIENTS

Diseases (international classification)		Men	Women
<b>I. GENERAL DISEASES:</b>			
1. Typhoid Fever .....		1	2
4. Malaria .....		9	....
6. Measles .....		27	15
9. Diphtheria .....		4	....
19. Other Epidemic Diseases:			
Chicken Pox .....		3	2
German Measles .....		1	3
Mumps .....		51	6
Vaccinia .....		....	3
28. Tuberculosis, of the Lungs:			
Tuberculosis, Acute Pulmonary .....		1	2
37. Syphilis .....		1	....
38. Gonococcus Infection:			
38b. Gonococcus infection of Bladder .....		2	....
47. Acute Articular Rheumatism:			
Rheumatic Fever, Subacute .....		1	1
53. Leuchaemia:			
53c. Leuchaemia .....		1	....
<b>II. DISEASES OF THE NERVOUS SYSTEM AND OF THE ORGANS OF</b>			
<b>SPECIAL SENSE:</b>			
74. Other diseases of the Nervous System:			
Intracranial injury, Concussion of Brain .....		4	....
Anaemia of Brain .....		1	....
Neurasthenia .....		....	1
75. Diseases of the Eyes and their annexa:			
75a. Conjunctivitis, Acute .....		3	1
75c. Blepharitis .....		....	1
76. Diseases of the Ears:			
Otitis Media, Acute .....		14	2
<b>III. DISEASES OF THE CIRCULATORY SYSTEM:</b>			
78. Acute Endocarditis:			
Endocarditis, Acute .....		2	....
79. Organic Diseases of the Heart:			
Myocarditis, acute .....		....	1
83. Diseases of the Veins:			
Operation for Hemorrhoids .....		1	....
Phlebitis of Arm .....		1	....
Varicocele .....		1	....
84. Diseases of the Lymphatic System:			
Lymphangitis of Leg .....		4	1
85. Hemorrhage, other diseases of the Circulatory System:			
Epistaxis, following operation for Deviated Septum .....		1	....
<b>IV. DISEASES OF THE RESPIRATORY SYSTEM:</b>			
86. Diseases of the Nasal fossae:			
Operation for Adenoids .....		4	5
Rhinitis, Acute .....		6	1

## INFIRMARY, 1911-12. HOUSE PATIENTS—(Continued)

Diseases (international classification)	Men	Women
89. Acute Bronchitis:		
Bronchitis, Acute .....	12	9
Tracheitis .....	11	4
91. Bronchopneumonia:		
Pneumonia, Broncho .....	1	2
92. Pneumonia:		
Pneumonia, Lobar .....	2	...
93. Pleurisy:		
Pleurisy, Acute Fibrinous .....	4	3
Pleurisy, Sero-fibrinous .....	1	...
96. Asthma:		
Asthma .....	1	...
V. DISEASES OF THE DIGESTIVE SYSTEM:		
99. Diseases of the Mouth and annexa:		
99a. Diseases of the Teeth and Gums:		
Abscess, Alveolar .....	1	...
99b. Other diseases of the Mouth and annexa:		
Stomatitis .....	1	...
100. Disease of the Pharynx:		
Abscess, Tonsillar .....	5	2
Amygdalitis, Acute Follicular .....	34	18
Operation for Amygdalitis .....	25	7
Pharyngitis, Acute .....	22	4
Vincent's Angina .....	3	1
102. Ulcer of the Stomach:		
Ulcer of Stomach .....	1	...
103. Other diseases of the Stomach:		
Hyperchlorhydria .....	2	...
Nervous Dyspepsia .....	1	1
105. Diarrhoea and Enteritis:		
105b. Duodenitis .....	1	1
Enteritis, Acute .....	7	1
Fermentation, Intestinal .....	1	...
107. Intestinal Parasites:		
Oxyuris Vermicularis .....	1	...
Trichiniasis .....	1	...
108. Appendicitis and Typhilitis:		
Appendicitis, Acute .....	15	2
Operation for Appendicitis .....	4	3
109. Hernias, Intestinal Obstructions:		
Inguinal Hernia .....	1	...
Operation for Hernia .....	2	...
110. Diseases of the Intestines:		
110b. Other diseases of the Intestines:		
Constipation .....	2	...
117. Simple peritonitis:		
Peritonitis, Acute .....	...	1

## INFIRMARY, 1911-12. HOUSE PATIENTS—(Continued)

Diseases (international classification)		Men	Women
VI. NON-VEREAL DISEASES OF THE GENITO-URINARY SYSTEM AND ANNEXA:			
123. Calculi of the Urinary Passages:			
Nephroptosis .....	1	....	
124. Diseases of the Bladder:			
Cystitis, Acute .....	2		3
127. Non-venereal diseases of the male genital organs:			
Orchitis, Acute .....	6	....	
Phimosis, operation for .....	3	....	
128. Uterine hemorrhage:			
Menorrhagia .....	....		1
VIII. DISEASES OF THE SKIN AND OF THE CELLULAR TISSUES:			
Operation for retention cyst of scalp .....	1	....	
143. Furunculosis of Leg .....			
Furunculosis of Perineum .....	1		1
144. Acute Abscess:			
Abscess of:			
Arm .....	1	....	
Cheek .....	2	....	
Foot .....	1	....	
Gland of Neck, Tuberculous .....	1	....	
Heel .....	....		1
Shoulder .....	1	....	
Thigh .....	3	....	
Cellulitis of:			
Arm .....	1	....	
Face .....	1	....	
Foot .....	4	....	
Hand .....	1	....	
Heel .....	1	....	
Knee .....	1	....	
Leg .....	1	....	
Toe .....	1	....	
145. Other diseases of the Skin and annexa:			
145c. Dermatitis Venenata .....	5		4
Erythema Multiforme .....	1	....	
Impetigo Contagiosa .....	1	....	
Operation for wart .....	1	....	
Zoster .....	1	....	
X. DISEASES OF THE BONES AND OF THE ORGANS OF LOCOMOTION:			
146. Diseases of the Bones:			
Periostitis of Finger, Acute .....	1	....	
Frontal Sinusitis .....	9		2
147. Diseases of the Joints:			
Arthritis of, Acute:			
Knee joints .....	1	....	



## INFIRMARY, 1911-12. HOUSE PATIENTS—(Continued)

Diseases (international classification)	Men	Women
149. Other diseases of the organs of locomotion:		
Operation for Ganglion of Wrist .....	....	1
Rheumatism, Muscular .....	3	....
Bursitis, Acute .....	....	1
Tenontosynovitis of Knee .....	1	2

## XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES:

164. Poisoning by food .....	....	2
167. Burns:		
Back .....	1	....
Leg .....	1	....
171. Traumatism by cutting or piercing instruments:		
Chest .....	....	1
Eyelid .....	1	....
Face .....	2	....
Hand .....	1	....
Heel .....	1	....
Hip .....	2	....
Leg .....	1	....
Nose .....	1	....
Scalp .....	2	....
Thumb .....	1	....
178. Excessive Cold:		
Frostbite of lower extremity:		
Feet .....	1	....
185. Fractures:		
185a. Dislocations:		
Semi-lunar cartilage of Knee .....	....	1
185b. Sprains:		
Ankle .....	10	2
Back .....	1	....
Shoulder .....	2	....
185c. Fractures:		
Clavicle .....	1	....
Fibula .....	2	1
Radius .....	1	....
Thumb .....	1	....
Tibia .....	1	....

## XIV. ILL-DEFINED DISEASES:

189a. Diseases not specified or ill-defined:		
Headache .....	1	1
Unknown .....	11	1
189b. No disease, feigned disease .....	2	4
<b>TOTAL</b> .....	<b>413</b>	<b>136</b>

## DISPENSARY CASES BY CLASSES, 1911-12. MEN

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
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## I. GENERAL DISEASES:

## 1. Typhoid Fever:

Anti-Typhoid Inoculation .....	1	....	....	....	....	....	1
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4. Malaria .....	2	3	3	2	....	....	10
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6. Measles .....	9	10	5	2	....	....	26
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9. Diphtheria .....	2	....	2	....	....	....	4
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## 19. Other Epidemic Diseases:

Chicken Pox .....	2	1	....	....	....	....	3
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German Measles .....	....	....	1	....	....	....	1
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Mumps .....	18	14	9	9	....	....	50
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Vaccinia .....	122	9	4	....	6	6	147
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28. Tuberculosis of Lungs .....	....	1	....	....	....	....	1
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## 31. Abdominal Tuberculosis:

Tuberculosis of Bladder .....	....	1	....	....	....	....	1
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36. Rickets, Curvature of Spine .....	....	1	....	....	....	....	1
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37. Syphilis, Penis .....	....	....	1	....	....	....	1
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## 38. Gonococcus Infection:

Urethra .....	4	7	3	1	....	....	15
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Miscellaneous .....	3	....	2	....	....	....	5
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## 48. Chronic Rheumatism:

Spondylitis Deformans .....	....	1	....	....	....	....	1
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49. Scurvy .....	....	1	....	....	....	....	1
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53. Leuchaemia .....	....	1	....	....	....	....	1
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## II. DISEASES OF THE NERVOUS SYSTEM:

## 66. Paralysis without specified cause:

Paralysis of 7th Cranial Nerve .....	1	....	....	....	....	....	1
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69. Epilepsy .....	1	1	2	....	....	....	4
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## 73. Neuralgia and Neuritis:

Hysteria .....	....	....	....	....	1	....	1
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## Neuralgia:

Facial .....	....	3	1	1	....	....	5
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Intercostal .....	1	1	1	1	....	....	4
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Miscellaneous .....	....	1	....	2	....	....	3
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Neuritis, Facial .....	1	....	1	....	....	....	2
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## 74. Other diseases of Nervous System:

Anaemia of Brain .....	1	....	4	....	....	....	5
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Neurasthenia .....	3	6	4	3	4	....	20
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Spasm, Habit .....	....	1	2	....	1	....	4
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## 75. Diseases of the Eyes and annexa:

a. Conjunctivitis, Acute .....	46	49	32	36	11	1	175
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Conjunctivitis, Chronic .....	4	2	2	4	1	....	13
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c. Astigmatism .....	22	16	9	11	5	....	63
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Blepharitis .....	12	6	9	5	3	....	35
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Hordeolum .....	14	10	3	5	2	....	34
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Foreign body .....	1	4	11	3	1	....	20
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Miscellaneous .....	6	3	6	4	3	....	22
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## DISPENSARY CASES BY CLASSES, 1911-12. MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
76. Diseases of the Ears:							
Cerumen, Accumulation of .....	27	7	10	8	10	....	62
Eustachian Salpingitis .....	2	8	7	6	2	....	25
Otitis Externa .....	3	1	4	....	1	....	9
Otitis Media .....	5	10	11	9	2	....	37
Miscellaneous .....	1	....	1	....	....	....	2
III. DISEASES OF THE CIRCULATORY SYSTEM:							
78. Acute Endocarditis .....	1	....	....	....	....	....	1
79. Organic Diseases of the Heart:							
a. Valvular, Chr. Cardiac .....	1	1	....	1	....	....	3
Miscellaneous .....	1	....	....	1	....	....	2
80. Angina Pectoris .....	....	....	1	....	....	....	1
83. Diseases of the Veins:							
Hemorrhoids .....	2	....	5	2	1	....	10
Varicocele .....	1	2	3	....	....	....	6
Miscellaneous .....	1	1	1	....	1	....	4
84. Diseases of the Lymphatic System:							
Lymphadenitis .....	5	1	2	3	2	....	13
Lymphangitis .....	2	5	3	4	....	....	14
85. Hemorrhage:							
Epistaxis .....	4	5	1	....	....	....	10
Heart Block .....	....	1	....	....	....	....	1
IV. DISEASES OF THE RESPIRATORY SYSTEM:							
86. Diseases of the Nasal Fossae:							
Adenoids .....	3	....	1	....	....	....	4
Deviation of Septum .....	3	2	2	2	....	1	10
Rhinitis, Acute .....	293	199	207	132	37	7	875
Rhinitis, Chronic .....	7	6	4	3	2	....	22
Miscellaneous .....	4	2	1	3	....	....	10
87. Diseases of the Larynx:							
Laryngitis .....	26	18	12	11	3	1	71
88. Diseases of the Thyreoid Body:							
Goitre .....	....	....	....	....	1	....	1
89. Bronchitis, Acute .....							
Bronchitis .....	11	4	8	5	2	....	30
Tracheitis .....	91	92	77	64	22	2	348
92. Pneumonia:							
Pneumonia, Lobar .....	....	....	1	....	....	....	1
93. Pleurisy:							
Pleurisy, Acute Fibrinous .....	2	2	1	1	....	....	6
Miscellaneous .....	1	....	....	1	....	....	2
96. Asthma .....	2	1	2	3	....	....	8
97. Pulmonary Emphysema, Interlobar..	....	....	1	....	....	....	1
98. Other diseases of the Respiratory System:							
Hay Fever .....	2	1	....	....	2	....	5

## DISPENSARY CASES BY CLASSES, 1911-12: MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
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## V. DISEASES OF THE DIGESTIVE SYSTEM:

## 99. Diseases of the Mouth and annexa:

## a. Diseases of Teeth and Gums:

Abscess, Alveolar .....	7	6	4	2	2	....	21
Caries, Tooth .....	1	....	....	....	2	....	3
Gingivitis .....	1	1	....	1	1	....	4
Miscellaneous .....	....	....	1	1	....	....	2

b. Tumor of Tongue .....	....	....	....	1	....	....	1
Stomatitis .....	4	3	5	9	1	....	22

## 100. Diseases of the Pharynx:

Amygdalitis, Acute .....	96	75	61	47	18	2	299
Amygdalitis, Chronic .....	5	3	4	4	4	....	20
Amygdalitis, Follicular .....	4	3	4	3	2	....	16
Pharyngitis, Acute .....	188	154	147	120	39	6	654
Pharyngitis, Chronic .....	4	1	2	3	....	....	10
Vincent's Angina .....	3	....	5	....	....	....	8
Miscellaneous .....	2	....	1	....	....	....	3

102. Ulcer of the Stomach .....	1	1	....	....	....	1	3
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## 103. Other diseases of the Stomach:

Fermentation, Gastric .....	....	....	....	2	1	....	3
Gastritis .....	1	3	2	5	1	....	12
Hyperchlorhydria .....	1	3	....	2	....	....	6
Miscellaneous .....	1	3	1	....	....	....	5

## 105. Diarrhoea and Enteritis:

Colitis .....	1	1	1	1	....	....	4
Duodenitis .....	6	5	6	2	2	1	22
Enteritis .....	21	14	7	7	5	1	55
Gastroenteritis .....	6	1	1	1	1	....	10
Miscellaneous .....	2	4	1	1	....	....	8

## 107. Intestinal Parasites:

Oxyuris Vermicularis .....	1	....	1	....	....	....	2
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108. Appendicitis, Acute .....	7	2	6	2	....	....	17
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109. Hernias, Inguinal .....	3	4	4	4	2	....	17
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## 110. Diseases of the Intestines:

## a. Diseases of the Anus:

Fissure of Anus .....	1	2	2	....	....	....	5
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## b. Other diseases of Intestines:

Constipation .....	45	42	29	26	11	2	155
Miscellaneous .....	1	1	....	1	....	....	3

## 114. Biliary Calculi:

Cholelithiasis .....	....	1	....	....	....	....	1
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## 115. Other diseases of the Liver:

Functional Derangement .....	1	....	....	1	....	1	3
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## VI. DISEASES OF THE GENITO-URINARY SYSTEM:

## 122. Other diseases of the Kidneys:

Ureteritis .....	....	1	....	....	....	....	1
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## 124. Diseases of the Bladder:

Cystitis, Acute .....	2	....	1	1	....	....	4
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## DISPENSARY CASES BY CLASSES, 1911-12. MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
125. Diseases of the Urethra:							
Urethritis, Acute .....	3	....	....	1	....	....	4
127. Non-venereal diseases, Male Genital Organs:							
Balanoposthitis .....	2	....	1	1	....	....	4
Orchitis, Acute .....	....	2	....	....	....	....	2
Redundant Prepuce .....	2	....	....	2	....	....	4
Seminal Emissions .....	6	2	6	4	....	....	18
Miscellaneous .....	1	3	1	....	....	....	5
133. Non-puerperal diseases of the Breast:							
Adenoma of the Breast .....	....	....	1	....	....	....	1
Mastitis, Acute .....	1	....	....	....	....	....	1

## VIII. DISEASES OF THE SKIN:

## 143. Furuncle:

## Furunculosis:

Arm .....	10	6	4	1	....	....	21
Ear region .....	3	3	3	4	4	....	17
Face .....	11	13	8	3	4	2	41
Finger .....	1	3	1	....	1	....	6
Foot .....	1	1	1	....	....	....	3
Head .....	....	2	....	....	....	....	2
Leg .....	4	3	2	1	1	....	11
Neck .....	20	16	16	9	2	....	63
Miscellaneous .....	4	3	7	....	4	....	18
Carbuncle .....	2	....	....	....	....	....	2

## 144. Acute Abscess:

## Abscess of:

Arm .....	....	2	1	1	....	....	4
Ear region .....	3	2	1	1	....	....	7
Face .....	2	2	4	6	....	....	14
Finger .....	8	4	6	3	1	....	22
Foot .....	8	5	2	2	....	....	17
Hand .....	4	1	1	1	1	....	8
Leg .....	5	....	....	1	1	....	7
Miscellaneous .....	....	....	1	....	2	....	3

## Cellulitis of:

Face .....	1	....	2	2	2	....	7
Foot .....	8	3	3	1	....	....	15
Hand .....	....	....	2	1	....	....	3
Leg .....	....	1	1	2	....	....	4
Miscellaneous .....	1	....	....	1	....	....	2

## 145. Other diseases of the Skin and annexa:

## a. Trichophytosis:

Crural region .....	8	4	2	1	....	....	15
Groin .....	2	3	1	1	....	....	7
Miscellaneous .....	21	13	5	9	2	....	50



## DISPENSARY CASES BY CLASSES, 1911-12. MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
b. Scabies .....	6	2	5	3	2	....	18
c. Other diseases of the Skin and annexa:							
Acne .....	11	11	5	2	2	3	34
Alopecia Areata .....	....	....	....	....	1	....	1
Chiblain .....	1	3	....	2	2	....	8
Cicatrix, Neck .....	....	....	....	....	1	....	1
Clavus .....	8	7	11	3	2	....	31
Bromidrosis .....	....	1	....	....	....	....	1
Comedo .....	1	....	....	2	....	....	3
Dermatitis Venenata:							
Arms .....	7	3	3	5	5	....	23
Face .....	6	7	4	5	3	1	26
Hands .....	1	1	....	....	1	....	3
Legs .....	....	1	1	....	1	....	3
Miscellaneous .....	21	12	20	14	1	....	68
Dermatitis Exfoliativa .....	1	....	1	....	....	....	2
Dermatitis Herpetiformis .....	....	1	....	....	....	....	1
Dermatitis Medicamentosa .....	....	1	2	1	....	....	4
Dermatitis Traumatica .....	....	1	....	2	....	....	3
Eczema:							
Arms .....	....	....	....	1	1	....	2
Face .....	3	1	....	2	....	....	6
Hands .....	....	....	1	1	2	....	4
Legs .....	7	8	6	3	....	....	24
Miscellaneous .....	5	5	1	4	1	....	16
Erythema Multiforme .....	2	....	....	....	....	....	2
Erythema Nodosum .....	....	....	1	....	....	....	1
Erythema Simplex .....	....	....	....	....	1	....	1
Fissure of Skin .....	5	4	2	1	....	....	12
Herpes .....	8	13	6	6	....	....	33
Hyperidrosis .....	....	1	1	....	....	....	2
Impetigo .....	11	9	4	3	....	....	27
Impetigo Contagiosa .....	2	1	3	1	....	....	7
Intertrigo .....	....	1	1	1	....	....	3
Callositas .....	1	....	3	1	....	....	5
Lipoma .....	....	1	....	....	1	....	2
Miliaria .....	....	....	1	....	1	....	2
Phtheiriasis .....	4	2	1	1	....	....	8
Pityriasis Rosea .....	2	1	1	2	....	....	6
Pityriasis Simplex .....	1	....	....	....	....	....	1
Pruritis .....	1	....	....	1	....	....	2
Pruritis Ani .....	....	....	3	3	1	....	7
Psoriasis .....	1	....	....	....	....	....	1
Papilloma, Back .....	....	1	....	....	....	....	1
Seborrhoea .....	6	2	4	1	2	....	15
Sudamina .....	1	2	....	1	....	....	4
Sebaceous Cyst .....	4	2	1	1	1	1	10
Urticaria .....	8	2	4	3	2	....	19

## DISPENSARY CASES BY CLASSES, 1911-12. MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
Wart:							
Foot .....	9	16	21	9	3	....	58
Hand .....	6	5	8	2	1	....	22
Miscellaneous .....	4	5	1	2	....	....	12
Zoster .....	1	....	2	....	....	....	3
Nails:							
Ingrowing nail .....	1	5	2	1	1	....	10
Onychia .....	....	1	1	....	....	....	2
Paronychia .....	2	1	1	1	1	....	5

## IX. DISEASES OF THE BONES AND OF THE

## ORGANS OF LOCOMOTION:

## 146. Diseases of the Bones:

Ethmoidal Sinusitis .....	3	1	1	....	....	....	5
Frontal Sinusitis .....	12	14	10	9	6	2	53
Periostitis .....	1	2	....	1	....	....	4
Miscellaneous .....	2	1	....	1	....	....	4

## 147. Diseases of the Joints:

Arthritis .....	2	2	1	1	....	....	6
-----------------	---	---	---	---	------	------	---

## 149. Other diseases of the Organs of

## Locomotion:

Ankylosis .....	....	....	....	1	....	....	1
Hallux Valgus .....	....	3	1	2	....	....	6
Pes Planus .....	4	2	3	2	1	....	12
Rheumatism, Muscular .....	9	10	5	6	4	1	35
Tenosynovitis .....	11	8	4	2	1	....	26
Miscellaneous .....	2	1	1	....	....	....	4

## X. MALFORMATIONS:

## 150. Congenital malformations of Skin:

## Naevus:

Back .....	1	....	1	....	....	....	2
Face .....	....	1	....	1	....	....	2
Tongue .....	1	....	....	....	....	....	1
Spine .....	1	....	....	1	1	....	3
Kidney .....	1	....	....	....	....	....	1

## XIII. AFFECTIONS PRODUCED BY EXTERNAL CAUSES:

164. Poisoning by food .....	1	1	....	....	1	....	3
------------------------------	---	---	------	------	---	------	---

## 165. a. Other acute poisonings:

Insect bite .....	1	....	1	....	2	....	4
-------------------	---	------	---	------	---	------	---

## b. Drug poisonings:

Cocaine .....	....	....	....	....	1	....	1
Iodine .....	....	....	....	....	1	....	1

## 167. Burns:

Face .....	3	1	2	1	....	....	7
Finger .....	2	1	1	2	....	....	6
Foot .....	....	....	1	....	1	....	2
Hand .....	3	....	2	1	....	....	6
Leg .....	....	1	....	1	....	....	2
Miscellaneous .....	3	1	....	....	....	....	4

## DISPENSARY CASES BY CLASSES, 1911-12. MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
171. Traumatism by cutting or piercing instruments:							
Arm .....	1	---	1	---	---	---	2
Face .....	6	5	1	3	1	---	16
Foot .....	4	1	2	1	---	---	8
Head .....	4	3	4	4	1	1	17
Hand .....	18	14	12	14	6	---	64
Leg .....	1	1	---	1	---	---	3
Miscellaneous .....	2	---	1	---	---	---	3
174. Traumatism by machines:							
Arm .....	---	---	1	---	---	---	1
175. Traumatism by crushing:							
Toe .....	---	1	---	---	---	---	1
176. Injuries by animals .....	2	---	2	1	1	---	6
177. Starvation:							
<i>a.</i> Over-exertion .....	---	1	---	---	---	---	1
178. Excessive Cold:							
Frozen Feet .....	---	---	---	---	1	---	1
Frozen Thigh .....	---	1	---	---	---	---	1
185. <i>a.</i> Dislocations:							
Cartilage:							
Costal .....	---	---	1	---	---	---	1
Knee .....	2	1	---	---	---	---	3
Semi-lunar .....	3	1	---	1	1	---	6
Finger .....	1	---	---	---	1	---	2
Metatarsus .....	---	1	---	---	---	---	1
Thumb .....	2	---	---	---	---	---	2
<i>b.</i> Sprains:							
Ankle .....	21	16	13	8	1	1	60
Back .....	1	---	1	---	---	---	2
Finger .....	6	---	2	1	---	---	9
Foot .....	1	2	1	---	---	---	4
Knee .....	---	1	1	3	---	---	5
Neck .....	2	---	---	---	---	---	2
Shoulder .....	3	3	2	2	---	---	10
Thumb .....	4	6	2	1	2	---	15
Toe .....	1	1	2	---	---	---	4
Wrist .....	3	2	---	4	---	---	9
Miscellaneous .....	---	---	2	---	1	---	3
<i>c.</i> Fractures:							
Ankle .....	---	1	---	---	---	---	1
Arm .....	---	---	---	---	1	---	1
Clavicle .....	---	---	---	1	---	---	1
Colles .....	---	---	---	1	---	---	1
Fibula .....	1	---	---	---	---	---	1
Finger .....	---	1	---	---	---	---	1
Metacarpus .....	---	---	---	1	2	---	3
Nose .....	1	1	---	---	---	---	2
Rib .....	---	---	1	---	---	---	1
Tibia .....	---	1	---	---	---	---	1
Thumb .....	2	---	---	---	---	---	2

## DISPENSARY CASES BY CLASSES, 1911-12. MEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
186. Other External Violence:							
I. <i>Organs and Special Structures.</i>							
Strain of muscles of:							
Abdomen .....	1	1	1	1	---	---	4
Ankle .....	1	3	1	---	---	---	5
Back .....	1	3	1	4	---	---	9
Chest .....	1	---	1	1	2	---	5
Foot .....	---	2	2	2	---	---	6
Hand .....	1	2	1	1	---	---	5
Heel .....	---	---	---	---	1	---	1
Knee .....	---	---	1	---	---	---	1
Leg .....	1	1	1	---	---	---	3
Neck .....	2	---	---	---	---	---	2
Shoulder .....	2	1	1	1	---	---	5
Side .....	1	---	1	1	---	---	3
Sternum .....	---	1	---	---	---	---	1
Thigh .....	---	1	---	---	---	---	1
Miscellaneous .....	3	1	1	5	---	---	10
Concussion, Brain .....	---	1	---	---	---	---	1
Haematoma, Ear, External .....	---	---	2	---	---	---	2
Intracranial Injury .....	2	1	---	---	---	---	3
Rupture, Tendon .....	---	1	1	---	---	---	2
Tympanum Membrane .....	---	2	---	---	---	---	2
II. <i>Regions.</i>							
Ankle .....	3	---	2	5	---	---	10
Arm .....	11	8	7	5	1	1	33
Back .....	3	1	2	---	---	---	6
Chest .....	4	1	---	1	1	---	7
Face .....	4	5	10	9	1	---	29
Feet .....	25	18	10	10	2	---	65
Hands .....	22	21	23	13	2	---	81
Head .....	1	1	1	---	---	---	3
Leg .....	21	14	16	7	4	---	62
Shoulder .....	1	2	2	1	---	---	6
Thigh .....	4	1	---	1	2	---	8
Miscellaneous .....	9	5	2	2	1	---	19
XIV. ILL-DEFINED DISEASES:							
189. Unclassified or Ill-defined:							
a. Diseases not specified:							
Dentition .....	2	1	---	---	---	---	3
Headache .....	13	10	11	4	3	---	41
Insomnia .....	1	4	---	---	2	---	7
Unknown .....	4	3	3	1	---	---	11
Apprehension .....	6	1	3	2	2	---	14
Miscellaneous .....	3	---	---	---	---	---	3
b. No disease:							
Hygienic advice .....	7	3	2	2	---	---	14
No disease .....	15	6	6	4	6	---	37
Operation wound .....	2	1	2	1	---	---	6
TOTAL .....	1825	1334	1197	908	351	45	5660

## DISPENSARY CASES BY CLASSES, 1911-12. WOMEN

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
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## I. GENERAL DISEASES:

(International Classification.)

1. Typhoid Fever .....	---	1	---	---	---	---	1
4. Malaria .....	1	1	---	---	---	---	2
6. Measles .....	1	3	---	1	2	---	7
Post Measles .....	1	---	---	---	---	---	1
9. Diphtheria .....	1	---	---	---	---	---	1
19. Other Epidemic Diseases:							
Chicken Pox .....	2	1	---	---	---	---	3
Mumps .....	1	2	---	2	---	---	5
Vaccinia .....	108	11	4	2	4	2	131
28. Tuberculosis, Lungs .....	1	---	---	---	---	---	1
48. Chronic Rheumatism:							
Arthritis Deformans .....	---	---	---	---	---	2	2
Rheumatism, Chr. Artic. ....	---	1	---	---	1	---	2
51. Exophthalmic Goitre .....	1	---	---	---	---	---	1
54. Anaemia, Simple .....	3	3	2	3	1	---	12
55. Other General Diseases:							
Obesity .....	---	---	1	---	---	---	1
Purpura .....	1	---	---	---	---	---	1

## II. DISEASES OF THE NERVOUS SYSTEM:

73. Neuralgia and Neuritis:							
Hysteria .....	3	3	1	4	1	---	12
Neuralgia:							
Facial .....	4	2	1	1	1	---	9
Intercostal .....	---	2	1	---	---	1	4
Miscellaneous .....	2	3	1	2	1	---	9
Neuritis, Arm .....	1	---	1	---	---	---	2
74. Other diseases of Nervous System:							
Anaemia, Brain .....	3	1	---	1	---	---	5
Neurasthenia .....	22	7	18	8	3	3	61
Spasm, Habit .....	2	1	---	---	---	---	3
Vertigo .....	2	1	---	---	---	---	3
75. Diseases of the Eyes and annexa:							
Astigmatism .....	11	4	4	2	4	2	27
Blepharitis .....	7	5	2	4	4	1	23
Conjunctivitis .....	13	17	8	11	4	---	53
Foreign body .....	1	3	1	2	---	---	7
Hôrdeolum .....	12	7	2	1	5	---	27
Miscellaneous .....	9	1	2	2	2	---	16
76. Diseases of the Ears:							
Cerumen, Accumulation of .....	10	7	9	10	7	3	46
Eustachian Salpingitis .....	10	3	3	1	---	---	17
Otitis Externa .....	1	---	1	3	---	---	5
Otitis Media .....	6	3	---	1	1	---	11
Miscellaneous .....	2	2	1	2	2	---	9



## DISPENSARY CASES BY CLASSES, 1911-12. WOMEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
III. DISEASES OF THE CIRCULATORY SYSTEM:							
79. Organic Diseases of the Heart:							
Dilatation, Chronic .....	1	....	2	1	....	....	4
Myocarditis .....	....	....	....	2	....	....	2
Valvular, Chr. Cardiac .....	1	....	....	....	....	....	1
80. Angina Pectoris .....	1	....	1	....	....	....	2
83. Diseases of the Veins:							
Hemorrhoids .....	2	....	....	3	1	1	7
Phlebitis .....	1	....	....	....	....	....	1
Varicose .....	2	....	....	....	....	....	2
84. Diseases of the Lymphatic System:							
Lymphadenitis .....	6	4	1	1	1	....	13
Lymphangitis .....	....	2	....	....	....	....	2
85. Hemorrhage; other diseases:							
Epistaxis .....	3	....	1	....	2	....	6
Bradycardia .....	....	1	....	....	....	....	1
Tachycardia .....	1	....	1	....	1	....	3
IV. DISEASES OF THE RESPIRATORY SYSTEM:							
86. Diseases of the Nasal Fossae:							
Adenoids .....	4	....	....	....	....	....	4
Deviation, Nasal Septum .....	2	....	....	....	....	....	2
Rhinitis, Acute .....	143	108	74	87	39	1	452
Rhinitis, Chronic .....	8	2	5	....	....	....	15
Miscellaneous .....	....	2	....	1	1	....	4
87. Diseases of the Larynx:							
Laryngitis .....	26	18	21	12	6	1	84
88. Diseases of the Thyreoid Body:							
Goitre .....	6	3	....	1	....	....	10
89. Bronchitis, Acute:							
Bronchitis .....	....	6	1	2	2	....	11
Tracheitis .....	83	39	28	36	16	1	203
93. Pleurisy .....	1	....	1	....	1	....	3
96. Asthma .....	1	....	....	....	....	....	1
98. Other diseases of the Respiratory System:							
Hay Fever .....	....	....	....	....	1	....	1
V. DISEASES OF THE DIGESTIVE SYSTEM:							
99. Diseases of the Mouth and annexa:							
a. Diseases of Teeth and Gums:							
Abscess, Alveolar .....	2	1	2	....	1	....	6
Caries of Tooth .....	....	1	1	1	....	....	3
Gingivitis .....	2	....	....	1	....	....	3
b. Stomatitis .....	4	10	5	2	1	....	22
100. Diseases of the Pharynx:							
Amygdalitis, Acute .....	40	36	25	18	9	1	129
Amygdalitis, Chronic .....	6	2	2	1	1	....	12
Amygdalitis, Follicular .....	8	5	4	1	1	....	19

## DISPENSARY CASES BY CLASSES, 1911-12. WOMEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
Operation for Amygdalolith .....	---	---	1	3	1	---	5
Hypertrophy of Tonsil .....	1	1	1	---	---	---	3
Pharyngitis, Acute .....	155	108	74	76	25	3	441
Pharyngitis, Chronic .....	4	2	7	5	3	---	21
Miscellaneous .....	2	---	---	---	---	---	2
103. Other diseases of the Stomach:							
Fermentation, Gastric .....	8	2	3	---	3	---	16
Gastritis .....	---	2	2	---	2	---	6
Hyperchlorhydria .....	4	---	---	---	2	---	6
Nervous Dyspepsia .....	8	8	5	5	4	1	31
105. Diarrhoea and Enteritis:							
Fermentation, Intestinal .....	---	6	1	1	1	---	9
Gastroduodenitis .....	15	8	9	6	4	1	43
Enteritis .....	3	5	1	2	---	---	11
107. Intestinal Parasites:							
Oxyuris Vermicularis .....	---	1	---	---	---	---	1
108. Appendicitis:							
Appendicitis, Acute .....	1	1	---	---	1	---	3
Appendicitis, Chronic .....	1	4	---	1	---	---	6
110. Diseases of the Intestines:							
Autointoxication, Intestinal .....	---	1	---	---	---	---	1
Constipation .....	29	18	22	23	5	1	98
Impacted Faeces .....	---	---	1	---	---	---	1
Neurosis, Intestinal .....	---	---	---	1	1	---	2
115. Other diseases of the Liver:							
Functional derangement .....	2	---	---	---	---	---	2
Cholecystitis .....	---	---	1	---	---	---	1
VI. DISEASES OF THE GENITO-URINARY SYSTEM:							
119. Acute Nephritis .....	---	---	1	---	---	---	1
122. Other diseases of the Kidney and annexa:							
Nephroptosis .....	---	1	---	---	---	---	1
123. Calculi of the Urinary Passages:							
Calculus in Bladder .....	---	---	---	1	---	---	1
124. Diseases of the Bladder:							
Cystitis .....	1	2	1	1	---	1	6
128. Uterine Hemorrhage (non-puerperal):							
Menorrhagia .....	3	1	2	3	---	---	9
130. Other diseases of the Uterus:							
Amenorrhoea .....	30	10	4	4	1	---	49
Dysmenorrhoea .....	21	16	7	11	4	1	60
Leucorrhoea .....	4	5	---	4	---	---	13
Displacement of Uterus .....	1	---	1	---	2	---	4
132. Salpingitis and other diseases of the Female Genital Organs:							
Oöphoritis .....	1	---	2	1	1	---	5
Vaginitis, Chronic .....	1	---	---	---	---	---	1
133. Non-puerperal diseases of Breast:							
Tumor of Mammary Gland .....	1	---	1	---	---	---	2

DISPENSARY CASES BY CLASSES, 1911-12. WOMEN—(*Continued*)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
VIII. DISEASES OF THE SKIN:							
143. Furuncle:							
Furunculosis:							
External Auditory Canal .....	3	4	....	1	1	1	10
Face .....	2	4	2	4	1	....	13
Miscellaneous .....	3	3	....	2	1	....	9
144. Acute Abscess:							
Abscess of:							
Arm .....	....	....	1	....	....	....	1
Face .....	2	....	1	1	1	....	5
Foot .....	5	....	1	....	1	....	7
Hand .....	5	3	5	4	4	1	22
Miscellaneous .....	....	1	1	....	....	....	2
Cellulitis of:							
Arm .....	1	....	....	1	....	....	2
Face .....	....	....	1	....	....	....	1
Foot .....	3	4	4	1	....	....	12
Hand .....	5	4	3	....	2	....	14
Miscellaneous .....	1	1	....	....	....	....	2
145. Other diseases of Skin and annexa:							
a. Trichophytosis .....	2	4	5	....	1	....	12
b. Scabies .....	1	....	3	3	2	....	9
c. Other diseases of Skin and annexa:							
Acne, Face .....	25	14	7	7	3	1	57
Callositas .....	....	3	....	....	1	....	4
Chilblain .....	1	4	1	1	2	....	8
Clavus .....	8	7	7	6	6	....	34
Comedo, Ear .....	....	....	....	....	1	....	1
Dermatitis Herpetiformis .....	....	....	....	1	....	....	1
Dermatitis Medicamentosa .....	....	....	....	1	1	....	2
Dermatitis Traumatica .....	....	....	....	....	1	....	1
Dermatitis Venenata:							
Arm .....	6	7	7	5	1	....	26
Face .....	10	7	5	7	4	....	33
Hands .....	2	1	4	....	....	....	7
Legs .....	1	....	....	2	....	....	3
Miscellaneous .....	18	10	5	10	4	2	49
Eczema:							
Face .....	1	4	3	2	3	....	13
Hands .....	2	1	1	....	....	....	4
Legs .....	....	1	....	....	....	....	1
Miscellaneous .....	1	1	....	1	1	....	4
Eczema Seborrhoicum .....	2	1	....	....	....	....	3
Erythema Multiforme .....	1	1	....	....	....	....	2
Fissure of Skin .....	....	1	....	....	....	....	1
Herpes .....	8	5	7	10	2	....	32

## DISPENSARY CASES BY CLASSES, 1911-12. WOMEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
Impetigo:							
Face .....	5	....	2	....	....	1	8
Miscellaneous .....	1	2	....	....	....	....	3
Hyperidrosis .....	....	2	1	....	....	....	3
Keratosis .....	....	1	....	....	....	....	1
Pityriasis .....	....	....	1	....	....	....	1
Pemphigus .....	....	....	1	....	....	....	1
Pruritis .....	....	....	1	....	....	....	1
Urticaria .....	10	2	5	2	4	1	24
c. Other diseases of Skin and annexa:							
Wart:							
Foot .....	1	....	1	1	....	....	3
Hand .....	12	5	5	9	1	....	32
Miscellaneous .....	3	1	....	2	....	....	6
Zoster .....	....	....	1	....	....	....	1
Nails:							
Ingrowing nail .....	1	2	....	2	....	....	5
Onychia .....	1	....	....	....	....	....	1
Paronychia .....	2	2	2	1	1	....	8
Miscellaneous .....	3	1	1	2	1	....	8
IX. DISEASES OF THE BONES AND OF THE							
ORGANS OF LOCOMOTION:							
146. Diseases of the Bones:							
Frontal Sinusitis .....	5	3	3	4	1	....	16
147. Diseases of the Joints:							
Arthritis .....	....	1	....	....	....	....	1
149. Other diseases of the Organs of							
Locomotion:							
Bursitis .....	1	1	....	1	....	....	3
Operation for Ganglion of Wrist....	1	....	....	....	....	....	1
Hallux Valgus .....	4	3	2	1	....	....	10
Pes Planus .....	5	2	6	4	1	1	19
Rheumatism, Muscular .....	5	3	4	1	2	....	15
Tenontosynovitis .....	2	1	1	2	....	....	6
Torticollis .....	1	....	1	....	....	....	2
X. MALFORMATIONS:							
150. Congenital Malformations of:							
Spine .....	....	....	1	....	....	....	1
Naevus (Skin) .....	....	....	....	2	....	....	2
XIII. AFFECTIONS PRODUCED BY EXTERNAL							
CAUSES:							
164. Poisoning by food .....	....	3	2	....	....	....	5
165. Other acute poisonings:							
Insect sting .....	3	....	2	2	....	....	7
167. Burns:							
Arm .....	3	4	2	....	1	1	11
Hand .....	7	4	2	2	1	....	16
Leg .....	....	1	....	2	....	....	3
Miscellaneous .....	2	1	....	1	....	....	4

## DISPENSARY CASES BY CLASSES, 1911-12. WOMEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
171. Traumatism by cutting or piercing instruments:							
Hand .....	15	8	4	5	2	....	34
Miscellaneous .....	2	....	2	1	....	....	5
175. Traumatism by crushing .....	1	....	....	....	....	....	1
176. Injuries by animals .....	1	....	....	....	....	....	1
177a. Over-exertion:							
Exhaustion .....	....	....	....	....	1	....	1
185. a. Dislocations:							
Os-magnum .....	....	1	....	....	....	....	1
Sacro-iliac .....	1	....	....	1	....	....	2
Semi-lunar cartilage, Knee .....	2	....	....	....	....	....	2
Miscellaneous .....	....	2	1	....	1	....	4
b. Sprains:							
Ankle .....	18	8	5	6	1	....	38
Back .....	....	....	....	1	....	....	1
Finger .....	4	3	....	1	1	....	9
Foot .....	....	....	....	1	1	....	2
Instep .....	....	1	....	....	....	....	1
Heel .....	....	....	....	1	....	....	1
Knee .....	....	1	2	1	1	....	5
Shoulder .....	1	....	....	....	....	....	1
Thumb .....	1	2	2	2	....	1	8
Toe .....	....	1	....	....	....	....	1
Wrist .....	1	3	2	....	....	....	6
Miscellaneous .....	....	1	....	....	....	....	1
c. Fractures .....	1	....	1	....	....	....	2
186. Other External Violence:							
I. <i>Organs and Special Structures.</i>							
Strain of muscles of:							
Back .....	5	1	3	1	....	....	10
Foot .....	3	3	2	2	....	....	10
Leg .....	2	1	2	....	....	....	5
Neck .....	1	1	....	....	....	....	2
Shoulder .....	....	....	1	....	....	....	1
Wrist .....	....	....	1	....	....	....	1
Chest .....	1	....	....	....	....	....	1
Nose .....	....	....	1	....	....	....	1
Rib .....	1	....	....	....	....	....	1
Miscellaneous .....	....	1	....	1	1	....	3
II. <i>Regions.</i>							
Arm .....	6	....	3	....	....	....	9
Face .....	4	1	....	3	....	....	8
Foot .....	8	2	3	5	2	....	20
Hand .....	8	9	6	6	....	1	30
Leg .....	5	3	3	2	....	....	13
Miscellaneous .....	1	1	....	3	1	....	6



## DISPENSARY CASES BY CLASSES, 1911-12. WOMEN—(Continued)

Diseases (International classification)	1915	1914	1913	1912	Grad.	Special	Total
XIV. ILL-DEFINED DISEASES:							
189. Unclassified or Ill-defined:							
a. Disease not specified:							
Headache .....	54	29	16	14	5	2	120
Insomnia .....	3	2	3	1	....	....	9
Miscellaneous .....	2	2	....	1	....	....	5
b. No disease:							
Hygienic advice .....	3	2	3	2	....	....	10
No diagnosis .....	6	1	2	1	2	....	12
No disease .....	1	3	2	....	....	....	6
Operation wound .....	....	1	....	....	....	....	1
TOTAL .....	1241	773	585	553	263	40	3455

## INFIRMARY SUMMARIES, 1911-12

## DISPENSARY

	Men	Women	Total
Individuals treated .....	1,765	1,161	2,926
Number of treatments .....	14,039	7,227	21,266
Number of cases .....	5,660	3,455	9,115
Number of days open .....			280
Average number of patients treated daily .....			74.8
Average number of treatments per patient .....			7.2
Percentage of students treated .....			70.5
Percentage of graduating class, 1912, treated at Infirmary since its opening, January, 1907:			
Men .....		88.9	
Women .....		85.1	
Average .....			87.0

## HOUSE PATIENTS

DISCHARGED:	Men	Women	Total
Well .....	222	99	321
Relieved .....	182	35	217
Not relieved .....	8	2	10
Deceased .....	1	...	1
	413	136	549

Total number Infirmary days .....	2,951
Number of days open .....	280
Total number of cases .....	549
Total number of individuals .....	437
Average stay in days .....	5.3
Average number of patients per day .....	10.5
Largest number of patients in one day .....	38
Students who were in the Infirmary more than once during the year .....	59
Surgical cases .....	142
Operations .....	96
Anaesthesia (general) .....	43

## LABORATORY EXAMINATIONS

Blood .....	188	Sputum .....	40
Feces .....	39	Stomach Contents .....	5
Nose and Throat .....	132	Miscellaneous .....	14
Urine .....	252		

## STATISTICAL ADDENDA

COMPILED BY THE RECORDER OF THE FACULTIES

TABLE 1.—Summaries of officers of instruction in the Colleges at Berkeley, 1892-1912.

	Professors		Assoc.	Asst.	Dept. Teaching				
Year	Acting	Emer.	Profs.	Profs.	Lectrs.	Instrs.	Assts.*	Fellows	Totals
1892-93.....	16	----	9	10	1	19	18	4	77
1893-94.....	17	----	9	12	0	20	37	7	102
1894-95.....	21	----	9	12	0	24	41	7	114
1895-96.....	21	----	10	13	0	26	37	6	113
1896-97.....	22	----	10	18	0	21	28	8	107
1897-98.....	25	----	8	25	2	35	26	6	127
1898-99.....	30	1	14	19	1	40	36	0	141
1899-1900.....	29	2	15	20	2	40	40	5	153
1900-01.....	31	2	14	19	2	41	45	2	156
1901-02.....	29	1	13	22	5	56	43	0	169
1902-03.....	34	1	12	26	14	64	48	4	203
1903-04.....	36	2	14	42	14	51	60	3	222
1904-05.....	39	1	16	48	16	45	86	3	254
1905-06.....	37	3	18	51	14	55	82	3	263
1906-07.....	40	3	19	57	14	46	94	3	276
1907-08.....	44	3	22	59	12	47	104	4	295
1908-09.....	50	3	28	62	14	53	100	6	316
1909-10.....	55	8	23	70	14	52	118	7	347
1910-11.....	47	10	29	64	14	57	75	7	303
1911-12.....	48	9	42	57	18	81	110	9	374

\* Including readers.

TABLE 2.—Officers of Instruction in the Colleges and Departments away from Berkeley.

Year	L.O.*	Art	Law	Medicine		P. G.	Dentistry	Pharm.	Univ.
				S.F.	L.A.	Medicine			Farm
1896-97.....	8	6	5	84	....	54	37	14	....
1897-98.....	10	6	6	49	....	51	41	10	....
1898-99.....	11	6	5	68	....	58	43	7	....
1899-1900.....	11	8	5	70	....	82	45	10	....
1900-01.....	12	8	5	68	....	94	45	9	....
1901-02.....	11	8	5	81	....	101	50	11	....
1902-03.....	12	9	5	50	....	109	46	10	....
1903-04.....	13	10	6	62	....	28	24	9	....
1904-05.....	13	9	6	55	....	23	25	8	....
1905-06.....	9	9	6	66	....	....	22	8	....
1906-07.....	7	....	6	52	....	....	34	9	....
1907-08.....	7	11	6	54	....	....	34	8	....
1908-09.....	8	7	6	54	....	....	31	8	....
1909-10.....	7	7	6	58	59	....	26	8	....
1910-11.....	16	9	6	55	61	....	32	8	10
1911-12.....	16	10	6	55	61	....	31	7	14

\* 1894-95, 7; 1895-96, 7.

TABLE 3.—Students in the several colleges, 1902-1912.

NOTE.—The upper figures on the left of each group refer to men, the lower to women; the figures on the right side are the totals.

In Berkeley:	COLLEGES.	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-1911	1911-12										
Graduate Students: }	.....	123 96	219 109	269 269	160 109	141 102	243 243	155 196	351 351	148 133	281 281	151 173	324 324	186 217	403 403	214 211	425 425	258 243	501 501	311 267	578 578
	Letters .....	90 194	284 284	165 165	232 232	70 70	145 145	215 215	194 194	105 105	145 145	39 93	132 132	39 93	137 137	116 116	151 151	113 113	172 172	64 104	168 168
Undergraduates:	Social Sciences .....	268 712	980 980	265 714	979 979	274 740	1014 1014	290 764	1054 1054	286 763	1049 1049	311 790	1101 1101	732 1053	1053 1053	768 1109	1109 1109	786 1151	1151 1151	342 796	1138 1138
	Natural Sciences .....	89 113	202 202	84 108	192 192	81 108	189 189	103 103	191 191	115 115	221 221	124 96	250 250	104 104	281 281	170 170	400 400	260 260	609 609	408 408	862 862
	Commerce .....	87 1	114 5	119 119	6 125	5 154	4 154	154 4	154 4	177 177	186 186	4 190	190 4	222 222	224 224	258 258	258 258	5 263	263 263	5 268	268 268
	Agriculture .....	81 10	91 91	96 10	106 106	115 8	123 123	117 117	127 127	128 128	145 145	7 152	152 7	191 191	6 197	10 10	280 280	270 270	350 350	22 22	372 372
	Mechanics .....	233 2	235 235	242 242	1 243	264 264	266 266	0 267	264 264	0 264	293 293	0 260	260 0	293 293	301 301	0 301	294 294	0 294	316 316	0 316	316 316
	Mining .....	277 0	277 277	293 293	0 293	285 285	0 285	271 271	274 274	0 274	278 278	0 261	261 0	243 243	209 209	160 160	0 209	0 209	160 160	0 160	160 160
	Civil Engineering .....	134 0	134 134	166 166	0 166	207 207	211 211	219 219	219 219	0 219	250 250	0 246	246 0	232 232	232 232	236 236	0 236	236 236	234 234	0 234	234 234
	Chemistry .....	134 31	165 165	87 20	107 107	55 7	62 62	48 6	54 54	5 42	39 39	5 50	46 46	2 2	57 57	0 0	56 56	0 0	56 56	0 0	56 56
	At Large* .....																				
	Medicine .....																				
	Total Under-graduates }	1393 1063	2456 2456	1414 1019	2433 2433	1451 1018	2469 2469	1504 1015	2519 2519	1003 997	2505 2610	1613 1760	1729 1907	1863 2067	2122 2343	2266 2539	1179 1403	3301 3746	3602 4112	3602 4112	3602 4112
Total in the Colleges at Berkeley	(deducting for duplicates)	1514 1155	2669 2669	1570 1118	2688 2688	1590 1109	2699 2699	1647 1182	2839 2839	1643 1118	2761 2761	1760 1156	1907 2916	2067 3083	2343 3352	2539 3746	1403 3746	3746 4112	4112 4112	4112 4112	4112 4112
Percentage of men, departments at Berkeley		56.72	58.41	58.91	58.01	59.51	60.36	61.85	61.66	62.55	61.74										

\* In the above table, beginning 1910-11, students at large are summarized separately, and are also distributed among the several colleges, according to expressed collegiate preference.

TABLE 3—(Continued).

	1902-03	1903-1904	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12
Lick Observatory, Mt. Hamilton:	{ 4 0 4	3 0 3	3 0 3	3 1 4	1 1 2	3 0 3	3 0 3	1 1 2	1 1 2	2 0 2
In San Francisco:										
San Francisco Institute of Art.....	{ 70 113 183	78 135 213	94 149 243	75 120 195	.....	81 89 180	66 73 139	113 94 207	136 132 268	142 141 283
Hastings College of the Law.....	{ 82 4 86	73 4 77	74 5 79	74 2 76	73 1 74	69 0 69	98 2 100	116 1 117	104 1 105	117 2 119
College of Medicine.....	{ 96 16 112	99 15 114	88 12 100	64 9 73	35 5 40	25 1 26	28 7 35	39 10 49	18 0 18	16 2 18
Post-Graduate Medical Department	{ 18 3 21	.....	12 2 14	.....	.....	.....	.....	.....	.....	.....
College of Dentistry.....	{ 121 4 125	107 4 111	85 2 87	71 3 74	64 1 65	69 0 69	53 0 53	57 0 57	64 0 64	77 1 78
California College of Pharmacy.....	{ 63 16 79	75 7 82	83 3 86	76 5 81	43 4 47	42 3 45	62 5 67	67 5 72	78 7 85	79 1 80
Total in the Colleges in San Francisco }	{ 450 156 606	432 165 597	436 173 609	360 139 499	215 11 226	286 103 389	307 87 394	392 110 502	400 140 540	431 147 578
In Los Angeles:										
Total in the University (deducting for duplicates)	{ 1964 1311 3275	1997 1280 3277	2014 1280 3294	2007 1331 3338	1858 1129 2987	2046 1259 3305	2193 1257 3450	2465 1395 3860	2767 1549 4316	2984 1720 4704
Summer Session	{ 398 432 830	406 462 868	409 504 913	339 459 798	330 377 707	258 264 522	317 344 661	381 438 819	460 591 1051	562 1419 1981
Total	{ 2362 1743 4105	2403 1742 4145	2423 1784 4207	2346 1790 4136	2188 1506 3694	2304 1523 3827	2510 1601 4111	2846 1833 4699	3227 2140 5367	3546 3139 6655
Deduct for duplicate registrations in Summer Session and in Fall session following	275	290	305	268	204	154	109	189	245	293
Grand Total	3830	3855	3902	3868	3490	3673	4002	4510	5122	6392



## PRESIDENT'S BIENNIAL REPORT

TABLE 4.—Showing proportion (per cent) of the undergraduates, including special students, in each of the colleges at Berkeley.

	1902-03	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09	1909-10	1910-11	1911-12
Letters .....	11.56	9.54	8.70	7.70	5.70	5.05	5.07	5.11	5.21	4.66
Soc. Sciences ....	39.90	40.24	41.06	41.84	41.87	42.14	39.01	37.52	34.86	31.60
Nat. Sciences ....	8.22	7.89	7.65	7.58	8.82	8.42	10.41	13.54	18.45	23.93
Commerce .....	3.58	4.89	5.06	5.71	6.14	6.78	7.03	7.50	7.96	7.44
Agriculture .....	3.71	4.19	4.29	4.88	5.07	5.05	5.63	6.67	8.48	10.33
Mechanics .....	9.57	9.99	10.77	10.59	10.53	9.96	10.85	10.19	8.96	8.82
Mining .....	11.28	12.04	11.54	10.75	10.93	10.65	9.67	8.22	6.33	4.44
Civ. Eng. ....	5.46	6.82	8.38	8.37	8.74	9.58	9.11	7.11	7.14	6.49
Chemistry .....	6.72	4.40	2.51	2.14	1.67	1.49	1.85	1.55	1.72	1.55
Medicine .....	.....	.....	.....	.....	.30	.26	.55	.50	.09	.08
At large .....	.....	.....	.....	.....	.....	.53	1.33	1.18	*[2.06]	*[1.80]

\* In the above table, beginning 1910-11, students at large are summarized separately, and are also distributed among the several colleges, according to expressed collegiate preference.

TABLE 5.—Summary of students registered to November 1, 1907, 1908, 1909, 1910, 1911, and 1912.

A. The colleges at Berkeley:						
	Nov. 1, 1907	Nov. 1, 1908	Nov. 1, 1909	Nov. 1, 1910	Nov. 1, 1911	Nov. 1, 1912
(1) Graduate students in the colleges of letters and science (including engineering) .....	253	328	337	416	460	533
(2) Undergraduate students in the colleges of letters and science (including engineering) .....	2,460	2,538	2,745	3,033	3,308	3,753
Total .....	2,713	2,866	3,082	3,449	3,768	4,286
B. The colleges in San Francisco:						
(1) Law .....	65	95	112	59	116	97
(2) Medicine (3rd and 4th years only) ..	38	36	60	102	18	19
(3) Dentistry .....	69	56	57	59	75	89
(4) Pharmacy .....	41	69	78	85	78	87
Total .....	213	256	307	305	287	292

TABLE 5—(Continued).

C. The Los Angeles Dept. of Medicine (In 1909-10, 2nd, 3rd and 4th years; in 1910-11, 3rd and 4th years.)*									
Total students in all colleges	2,930	.....	44	34	19	7			
		3,122	3,433	3,788	4,074	4,585			
D. The summer session									
	( '07 ) 522	( '08 ) 661	( '09 ) 819	( '10 ) 1,051	( '11 ) 1,981	( '12 ) 2,275			
Gross total	3,452	3,783	4,252	4,839	6,055	6,860			
Deduction for all duplicates	175	139	240	287	331	403			
Net total	3,277	3,644	4,012	4,552	5,724	6,457			

NOTE.—The foregoing table does not include students in the following courses of instruction: University Extension, San Francisco Institute of Art, The University Farm School, Short Courses in Agriculture, Correspondence Courses at Davis, Farmers' Institutes, Agricultural Train, Wilmerding School of Industrial Arts.

\* Students in medicine (1st and 2nd years  
included in colleges at Berkeley).

Graduate	9	8	13	10	16	24
Undergraduate	4	10	20	21	35	58
Total	13	18	33	31	51	82

TABLE 6.—Degrees conferred, 1903-1912.

NOTE.—Figures for 1912 cannot be completed before December 20, 1912.

DEGREE	1903	1904	1905	1906	1907	1908	1909	1910	1911	1912
L.D. ....	{ 1 0 1	0 0 0	0 0 0	0 0 0	0 0 0	0 0 0	1 0 1	9 0 9	-----	4 0 4
D. ....				2 1 3	3 0 3	6 0 6	7 0 7	7 1 8	8 1 9	9 1 10
L.D. ....	{ 3 0 3	5 0 5	4 0 4	6 0 6	4 0 4	4 0 4	10 0 10	4 1 5	5 1 6	13 2 15
A. ....	{ 12 6 18	4 1 5	4 5 9	7 7 14	5 4 9	9 3 12	7 10 17	7 11 18	5 12 17	3 19 22
L. ....	{ 4 3 7	3 7 10	2 3 5	1 9 10	8 3 11	9 13 22	9 11 20	7 16 23	5 16 21	7 15 22
S. ....	{ 4 1 5	4 2 6	5 3 8	10 0 10	9 4 13	2 3 5	12 10 22	20 5 25	27 8 35	24 7 31
umber of higher degrees .....	{ 24 10 34	16 10 26	15 11 26	26 17 43	26 11 37	30 19 49	46 31 77	54 34 88	50 38 88	60 44 104
B. ....	{ 28 36 64	17 47 64	14 37 51	18 41 59	10 22 32	14 29 43	10 17 27	8 31 39	7 26 33	10 21 31
L. ....	{ 48 104 152	28 130 158	36 108 144	44 131 175	44 90 134	33 128 161	44 111 155	49 108 157	41 113 154	31 97 128
B. ....	{ 0 0 0	0 1 1	0 0 0	1 1 2	-----	-----	-----	-----	-----	-----
(Nat. Sci. ....	{ 13 24 37	13 26 39	16 20 36	17 19 36	7 13 20	13 34 47	19 16 35	34 20 54	37 34 71	50 47 97
Commerce	{ 5 0 5	6 0 6	12 1 13	24 0 24	16 0 16	18 0 18	14 0 14	22 1 23	22 1 23	15 0 15
Agricult're	{ 7 0 7	5 2 7	6 2 8	13 0 13	9 1 10	13 0 13	21 1 22	21 3 24	22 0 22	32 0 32
S. (Mechanics	{ 32 0 32	31 0 31	20 0 20	21 0 21	36 0 36	42 0 42	26 0 26	45 0 45	26 0 26	36 0 36
Mining.....	{ 30 0 30	30 0 30	22 0 22	41 0 41	43 0 43	35 0 35	26 0 26	27 0 27	44 0 44	22 0 22
Civil Eng...	{ 10 0 10	18 0 18	19 0 19	33 0 33	31 0 31	20 0 20	34 0 34	27 0 27	24 0 24	29 0 29
Chemistry	{ 20 6 26	15 6 21	14 2 16	8 2 10	5 0 5	6 2 8	3 1 4	5 1 6	9 0 9	7 0 7
umber of bach- lor's degrees {	193 170 363	163 212 375	159 170 329	220 194 414	201 126 327	194 193 387	197 146 343	238 164 402	232 174 406	232 165 397
L.B. ....	{ 33 0 33	20 1 21	19 1 20	15 1 16	28 0 28	14 0 14	14 0 14	23 0 23	19 0 19	28 1 29
D. ....	{ 25 5 30	25 3 28	16 2 18	17 2 19	21 4 25	15 1 16	6 1 7	7 4 11	5 1 6	10 1 11
D.S. ....	{ 40 3 43	44 1 45	40 0 40	22 2 24	18 0 18	20 0 20	15 0 15	16 0 16	10 0 10	15 0 15
*L.G. ....	{ 30 9 39	18 5 23	36 1 37	24 2 26	24 2 26	10 1 11	18 1 19	27 2 29	30 2 32	31 0 31
Arm.B. ....	{ 3 0 3	0 0 0	0 0 0	3 0 3	0 1 1	1 0 1	0 0 0	1 0 1	3 1 4	2 0 2
umber profes- sional degrees {	131 17 148	107 10 117	111 4 115	81 7 88	91 7 98	60 2 62	53 2 55	74 6 80	67 4 71	86 2 88

\*Ph.G. discontinued and replaced by Ph.C. in and after 1905.

TABLE 7.—Number of accredited schools each year, since the first accrediting of schools in 1883-84.

	1883-84	1884-85	1885-86	1886-87	1887-88	1888-89	1889-90	1890-91	1891-92	1892-93
Number public high schools accredited .....	3	4	6	6	6	7	11	17	24	30
Number private secondary schools accredited ....	0	0	0	0	1	2	2	6	7	10
Total number schools accredited .....	3	4	6	6	7	9	13	23	31	40
	1893-94	1894-95	1895-96	1896-97	1897-98	1898-99	1899-00	1900-01	1901-02	1902-03
Number public high schools accredited .....	39	43	52	61	66	76	87	93	93	100
Number private secondary schools accredited ....	9	14	15	15	16	15	23	23	22	18
Total number schools accredited .....	48	57	67	76	82	91	110	116	115	118
	1903-04	1904-05	1905-06	1906-07	1907-08	1908-09*	1909-10*	1910-11	1911-12	
Number public high schools accredited .....	104	99	106	114	122	140	147	155	172	
Number private secondary schools accredited ....	20	21	23	23	25	30	31	31	31	
Total number schools accredited .....	124	120	129	137	147	170	178	186	203	

\* In 1908-09 and 1909-10, 27 public high schools and 7 private secondary schools, though not fully accredited, were authorized to recommend for those years.



TABLE 8.—Enrollment of graduate students.

	1903- 04	1904- 05	1905- 06	1906- 07	1907- 08	1908- 09	1909- 10	1910- 11	1911- 12
Total number of graduate students .....	269	243	351	281	324	403	425	501	578
Number from University of California .....	137	130	240	159	177	236	214	258	307
Percentage of graduate students from University of California .....	50.9	53.4	68.3	56.4	54.6	58.5	50.3	51.4	53.1
Percentage of graduate students from other institutions ..	49.1	46.6	31.7	43.6	45.4	41.4	49.6	48.5	46.9
Total number of colleges and universities represented ..	71	71	79	67	81	90	98	120	122
Number of graduate students taking higher degrees (masters' and doctors' degrees not including juris doctor) .....	29	28	35	34	49	61	66	79	99
Percentage of graduate students taking higher degrees (masters' and doctors' degrees not including juris doctor) .....	10.8	11.5	9.9	12.1	15.1	15.1	15.5	15.7	17.1
Number of graduate students receiving Ph.D. ....	3	4	6	5	4	10	5	6	15
Number of graduate students receiving the bachelor's degree .....	18	20	14	8	3	7	8	7	7
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\* This index has reference for the most part to the text of the reports; tables, lists, schedules, etc., are indexed only in general terms, not in detail. The reader should therefore consult directly the *Financial Statement Concerning Sources and Amount of Receipts*, pp. 12-13; *Tables on the Medical Dept.*, p. 21; *Tables Compiled by the Examiner of Schools*, pp. 67-76; lists of *Gifts to the Library*, pp. 84-87; *University Press Distributions and Expenditures*, pp. 144-145; *Lists of Regents and Regents' Committees*, pp. 153-156 and 179-181; *Lists of Leases*, pp. 169 and 216; *Lists of Contracts*, pp. 170-171 and 197; *Gifts to the University*, pp. 223-283; *Lectures and Addresses*, pp. 284-298; *Obituary List*, p. 299; *Bibliography*, pp. 300-362; *Sunday Half-Hours of Music*, pp. 363-366; *University Meetings*, pp. 367-370; *Comptroller's Financial Tables*, pp. 373-512; *Infirmary Statistics*, pp. 512-549; *Recorder's Statistical Addenda*, pp. 549-558.

Only the heavy type captions, not the text, of the *Orders of the Board* (Reports of the Regents, pp. 152-216) are indexed.

The following abbreviations are used: agr. (agriculture), agrl. (agricultural), Am. (American), anthrop. (anthropology), assn. (association), bldg. (building), Cal. (California), cfd. (compared), co. (County), dept. (department), govt. (government), lab. (laboratory), libr. (library), L. O. (Lick Observatory), L. A. (Los Angeles), N. S. G. W. (Native Sons of the Golden West), no. (number), prof. (professor), pub. (publish or published), publ. (publications), repd. (represented), S. F. (San Francisco), U. C. (University of California); U. S. (United States).

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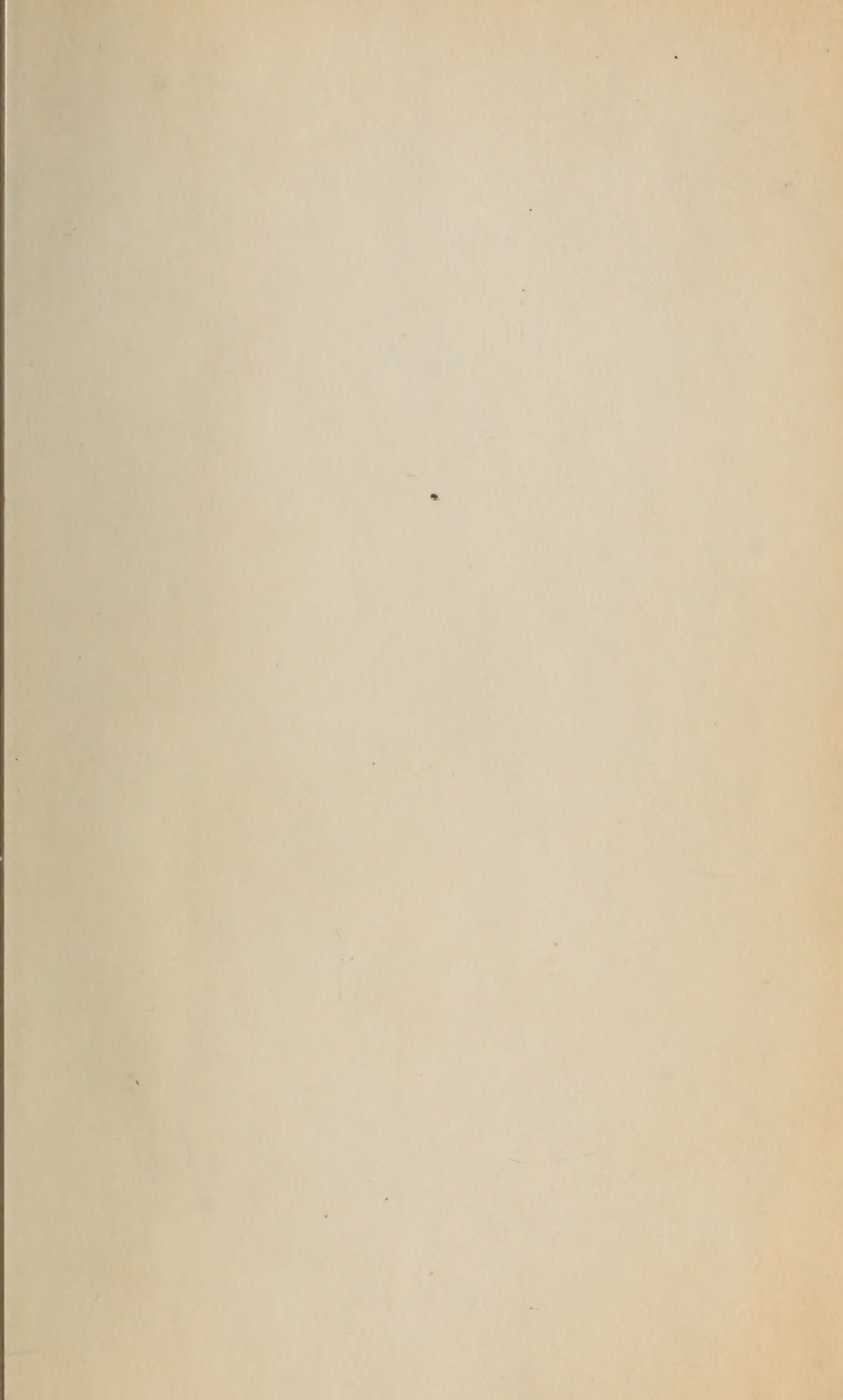
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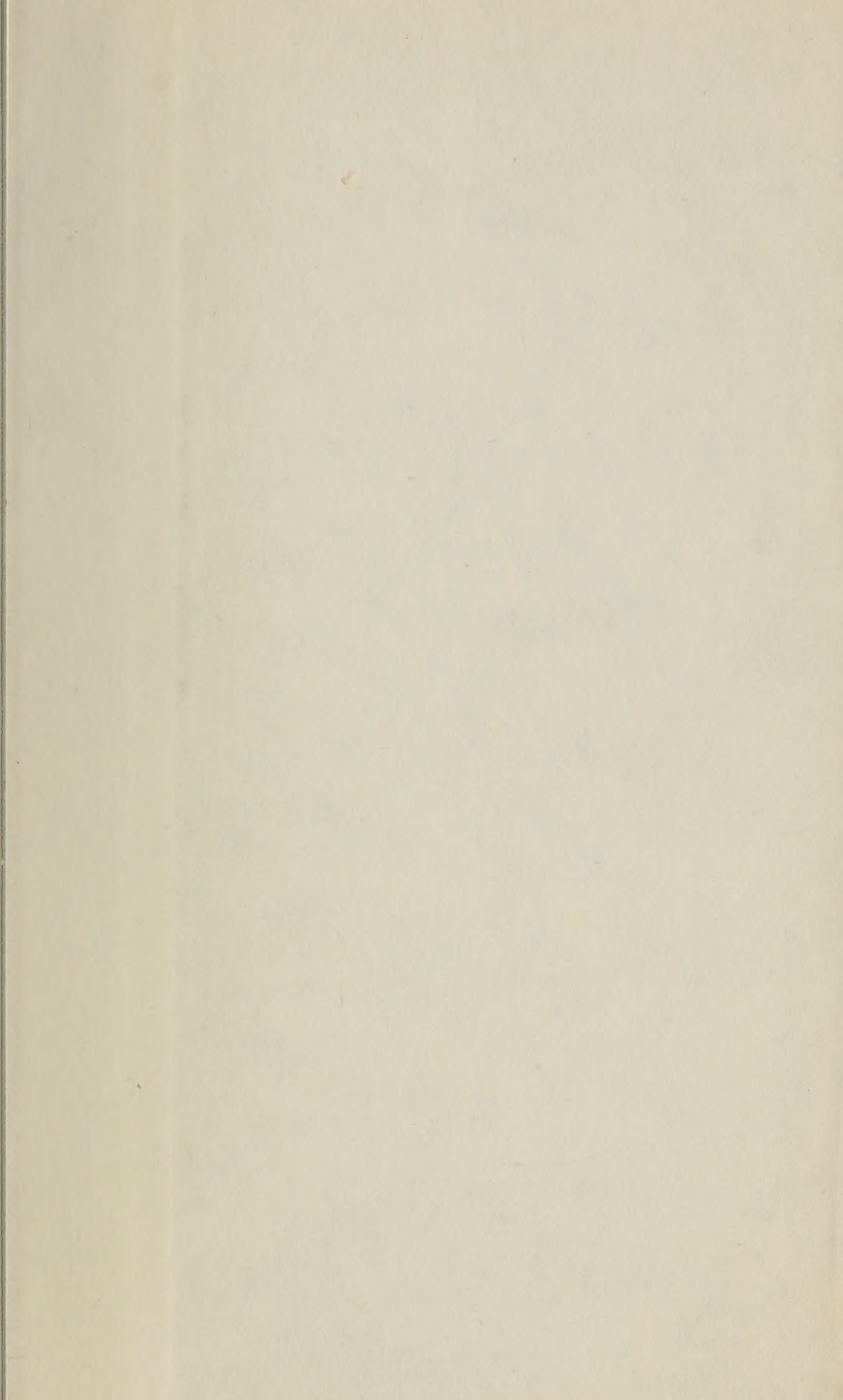
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